THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

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Improvement of Old Lands.

How shall our Worn-out Farms be restored to Fertility?

EDITORS OF THE CULTIVATOR—A few days ago, an enterprising, inquiring young farmer, asked me the question—"How shall I bring up my poor old farm?"—As this question is often asked me, and being persuaded that there are many young farmers scattered about, who really wish to be told how to go to work with the means immediately within their reach for the improvement of their land, I shall now attempt to give the substance of my reply to the young farmer, so far varying it as partly to answer the general question propounded at the head of this communication. To advanced farmers, my remarks may be quite common-place, but it should ever be borne in mind that there are those behind that want to come along up.

I am aware that the course I am now about to advocate for the renovation of worn-out lands, involves, what, if you please, may be called a good deal of hard work; but, for wise reasons, it is our allotment, in any and all the various walks of this life, to be beset with difficulties that must be surmounted, and to reap our most substantial advantages and enjoy our choicest pleasures, only as the reward of patient and strenuous exertion. To all such as are unwilling to use the means within their reach for the improvement of their soil, because there is work in it, I would say:—You are not fit to farm it here in New-England, at least; and it would be better for yourself, and all concerned, that you should immediately abandon the business, and be at something else, or go west, where you may find a virgin soil, and enjoy the inexpressible pleasure of giving it a clean thorough skinning. The question very naturally arises here, which I will not now discuss,—Whether a diligent and careful husbandry of the means for making manure, and a liberal application of that manure to the soil, is not, in the long run, the *easiest*, as well as the most agreeable and profitable course of farming in this land of barrenness?

Much of our soil, under a long course of wearing tillage, has been deprived of its vegetable matter; and in supplying this material, we also supply valuable inorganic elements which are contained therein. We are led by observation to conclude that the presence of vegetable mould is a grand essential to fertility; we find that nature, every where, in making her choicest soils, endows them liberally in this respect; its presence makes the soil more permeable to heat and moisture and more retentive of the same; it keeps land from packing down too hard, and helps the roots of plants to penetrate and range about at pleasure,—to find that genial air, and health-giving water and pasture, which cause the crops to mature into bountiful harvests. The absorbent and retentive properties of vegetable matter, make its presence desirable in the compost heap, also; for there it imbibes and retains those liquids and gases of the manure, which too many of our farmers, from negligence, or the want of a proper appreciation of their value, permit to run to waste. So we see, that by gathering up the waste substances on our farms that are rich in vegetable matter, and mixing them with the excrements of our farm-stock, we not only return to our tillage fields an important deficiency, but with it, we also carry on rich fertilising saline matters, which would otherwise too often be lost. In other words, there are means within our reach, by which we may more than double the quantity, without detriment to the quality, of our manure.

The first material I shall name, is swamp muck. The farmer who has an abundance of muck at his command, who understands how to manage it, and is willing to go at it resolutely, may be sure of making his land productive. I know several men who, in a very few years, have added barn to barn, and filled them too, as the result of a vigorous and thorough system of muck-composting. To manage muck to the best advantage, the arrangements for draining the swamp should be so complete, that men and cattle need not work up to their knees in mud and water. This being done, a quantity of the muck may be got out into heaps on dry ground, to be used when wanted. It pays well to keep two years stock beforehand in these heaps. The atmosphere will act favorably upon the muck, and it will be lighter to handle and draw; it will also crumble down to a fine powder, mix up better with the manure, and more completely absorb its liquids and gases. It is also well to get a year ahead with the compost, for by giving it more age and ripeness, the gases of the manure will all be developed and absorbed by the muck, and retained in the form of salts, and that, in turn, will expel all acidity, and thus the compost will be very much more effective upon the crops.

A barn cellar for the reception of the compost should by all means be had, if the construction of the buildings and the shape of the ground will admit of it. A layer of muck a foot deep may in the fall be spread over the cellar bottom, and when enough manure has accumulated under the scuttles in the stable floor to make a coat over the muck of 7 or 8 inches, the same may be spread. Then another coat of muck and manure, as before, and so on. If it can be so contrived as to get a year's stock of manure ahead, the compost may remain in the cellar till after haying, and then, at leisure, be carted out into large compact heaps on the field where wanted. The heaps should be nicely laid up to prevent unnecessary loss by evaporation.

The most perfect way of composting muck, and, on the whole, about as cheap a way as any, is to have the planks of the cattle stalls just long enough for the animals to stand up or lie down upon, and immediately behind them let there be a trench, four inches deep and fifteen or eighteen inches wide. Into this trench, each morning, put a suitable quantity of muck, and all the liquid and solid excrements from the animals will fall upon it, and the whole, when thrown out, will be thoroughly intermingled. In this way, a very much larger proportion of the muck can be used than in any other, because all parts of it come into immediate and intimate contact with the manure-droppings, warm from the stock, and a powerful action at once takes place. A warm place may be provided in or about the barn to hold a number of loads at a time of the muck, and then it can be taken up on a wheelbarrow, and deposited in the trench. This may by some be called extra labor; but it comes at a season of the year when it can be done about as well as not, and a compost thus prepared, will produce extra good crops, wherever applied. I did this kind of work with my own hands two winters; I found that it took, on an average half an hour longer, each morning, to do the 'chores,' and I also found, in the spring, that my manure heap was very much larger and better by the means.

If a cellar is not to be had, at reasonable expense, the compost may still be made in the trench, and thrown out at stable windows, in the usual way. In this case, it would be a matter of economy, in the long run, to build a shed-range in front of the stable windows, to protect the manure from bleaching by storms, or evaporation by sun.

If the idea of a trench seems too particular and notional a mode of farming, the planks of the stable floor may be laid with an opening of one-half inch between them, and so arranged that they can be readily taken up, and a layer of muck of 2 or 3 feet deep thrown under, to catch and hold the urine from the stables. In the spring, this will be found to be strong and good. The solid manure may be thrown out at the windows and afterwards mixed with muck, in the yard or in the field. If in the field, it is a good way to draw the muck to the spot where wanted, and drop it in two winrows, as long as the heap is to be when done, with a space say of 6 or 8 feet between the winrows. Spread into this space, of the muck from each side, a suitable layer, and then drive up to the ends with the manure, and throw on a layer of it. Then another coat of muck and of manure and so on, until the heap is about five feet high,—the last layer being of muck. Two parts of muck may be used to one of manure. The heap should be laid up as lightly as possible, in order to promote fermentation. It should not be too high, for the bottom courses will not decompose, if too much compressed.

In the spring, the barn yard and sheds should receive a good coat of muck, which should be occasionally plowed and worked over, and carted out in the fall, and another coat supplied. Each cow, yarded at night through the summer and fall, will prepare for use at least six loads of muck. The borders or one end of the yard may be the highest, so as to afford a dry place in a wet time, or there may be another yard for such times. If the yard is very large, it may be well to divide off a part of it for summer use, so as to concentrate the cattle droppings, and lessen their exposure to evaporation. I find that the compost prepared under sheds, is much stronger than that made in the open yard; and I strongly suspect that it would be economy to have more shed room than most of us do.

The hog-yard must not be neglected. If possible, it should be so located as to receive the horse manure, and the washings from the house. Muck should be added at suitable intervals, and the hogs will show a specimen of workmanlike and thorough composting,—paying particular attention to tossing about the horse-manure, and mixing it with the other materials, so as to prevent injury from burning. Horse-manure, if left in a heap by itself, becomes almost worthless by over-heating.

Muck and unleached ashes, in the proportion of four or five bushels of the latter to a-half cord of the former, is a good compost. I have never failed of raising large, sound, mealy potatoes with a dressing of this kind liberally spread upon a light warm loam. This mixture also makes a capital dressing for grass ground.

Muck and good fresh lime, in the proportion of five cords of the former to a hogshead of the latter, (my hogsheads hold seven bushels each,) is a good compost, for either corn, potatoes or grass. A layer of six inches deep of the muck is spread down, and the lime is slaked to a dry powder as fast as wanted, by sprinkling on just water enough for that purpose, and immediately scattered over the muck; then another layer of muck and of lime, and so on, till the whole is mixed. It is better to crumble the lime to a powder than to put it on in lumps, because it becomes more thoroughly intermingled with all the muck, and if slaked no faster than wanted, and if put on immediately, while yet warm, there will be heat enough to produce a powerful fermentation at once. The best of fresh lime is the cheapest; for it will make more than twice its bulk when dry slaked, and its action upon the muck is immediate and strong.

In composting muck with either lime or ashes, the best success will depend upon the care and precision exercised in mixing the ingredients. The layers of muck should not exceed six inches in thickness, and then the alkali will penetrate them in every direction, and all acids will thus be neutralised. Complete fermentation will be the most surely secured if the heaps are made up in hot weather,—as every one knows. Whenever I want to use more manure than I can make with my stock, as is frequently the case, I had rather depend upon these two composts than to be at the expense of the purchase and transportation of manure from abroad.

If the farm does not afford muck, other materials may probably be found, with which to save the volatile and liquid portions of the manure, as well as to increase the heap. The extra accumulations of leaves and vegetable mould in the hollows and at the foot of hill-sides in the forest, may be dug up with profit. I collect more or less of this material every year. In the latter part of November, and until snow falls, it may be dug up with stout hoes made for the purpose, and with a wheelbarrow, put into a heap or heaps convenient for hauling to the barn and yards, in the winter. It is so light as never to freeze more than two or three inches, and can therefore be handled at any time. It may be managed agreeably to the directions heretofore given for the treatment of muck, with this difference,—being free from hurtful acids, it is much sooner fit for use. It would not be advisable to take off this vegetable mould indiscriminately; but there are places where it gets to be four to six inches deep, and if taken off, a sufficiency for the wants of the trees will soon accumulate again. In such instances, the deposites are probably worth more to the tillage fields than to

the forest. Often, too, a stone wall or a rail fence, bordering a wood-lot, will be half buried by an accumulation of leaves in various stages of decay. Such deposites should be sought out and turned to good account. Last season I applied a compost, made of this vegetable mould and lime, to my potatoes, and I never raised better ones. They came out in the fall large and clean, have kept well, and cook finely.

Rich, thickly matted turf may be used for manure. It should be dug about two or three inches deep, and placed in the yard in the spring, and frequently plowed and pulverised during the summer, and in the fall carted out and a new layer supplied. The hogs like it in their yards, and it is healthy for them. A lot of it may also be dug up and piled by itself, to rot, and then it can be more readily incorporated with the manure from the stables. If the road-side does not afford good turf, it may be taken up near the fences in the fields. Where the farming has been bad heretofore, there will be high ridges or headlands beside the fences, and these may be taken to the yards. Then there are hollows in the pasture and elsewhere, that receive more than their share of the riches of the farm; and by taking a portion from them to the compost heap, and from thence distributing it back to the fields, the farmer may perhaps find his income increased.

All waste vegetable substances, wherever to be found, should be gathered up and brought to the yards. A systematic saving of this kind, amounts to a very important matter, in the course of a year. In short, *something* must be used to absorb those portions of the manure in the stables and yards, which are too often allowed to escape beyond reach.

To bring up a worn-out farm rapidly, such a rotation of crops should be adopted on the tillage fields as will give each of them a dressing of manure at regular intervals, and those as frequent as possible. The depth of furrow should be gradually increased, bringing up an inch or two of the poor lower stratum at each breaking up, until a surface soil of uniform quality, of nine to twelve inches deep, is obtained. The compost should be spread on the top of well-turned furrows and harrowed in, and the land planted to whatever crop it is best to raise. The next season, the surface should be levelled and made mellow, without bringing up the sod, and sowed to grain and grass seed. The decomposing sod beneath will furnish food for the growing crops; it will keep the land lighter and mellower than would a half-dozen plowings and cross-plowings in the spring; it will hold moisture for the use of the young grass for several years, in consequence of the vegetable decompositon beneath. Grass-seeds should therefore be scattered bountifully at seeding-time, for thus the soil is filled with the kind of vegetation wanted, and a richer turf is formed with which to enrich the land at the next plowing. Clover should be profusely mixed with the other grasses, for by its system of large tap-roots it fills the soil, draws up a good portion of its sustenance from below the reach of the other grasses, and the decay of its roots improves the surface soil. None of us like clover for hay so well as some other grasses; but while our farms are poor certainly, and our object is to improve them, we cannot dispense with the advantages arising from the liberal sowing of it.

I have often thought that if I had a poor farm to bring up, I would not at first attempt to raise much grain. In August or September, I would turn over as much of mowing-land as I could manure with 12 to 15 loads of compost per acre, spread the compost on the inverted furrows, and re-seed immediately to grass, without taking a grain crop. This dressing would probably improve the land as fast as 25 or 30 loads per acre would, if it were planted one year and sowed to grain the next, in the usual way; and thus *all* my tillage land could be sooner brought to doing something to remunerate labor.

Worn-out pastures, level enough to plow, may be improved as fast as leisure can be found to turn under two crops of buckwheat in a season, and then sow rye in the fall, and grass seeds on a late snow in the spring,—the rye to be fed off the following season, while the young grass is getting root. The rye should not be taken off in the form of a grain crop, for that would sap the land and defeat all improvement. In the immediate vicinity of large villages, where pastures and pasturage are scarce and high, this kind of management would pay well.

Steep unproductive hill-sides may be put into a more productive condition by planting them out to wood and timber; and in this day of rail roads and steam mills, no improvement can be made in some localities, that will, in the end, pay a better interest. If planted to trees, these lands lay in a state of rest, soon the annual fall of leaves adds fertilizing matter to the soil, the rains do not wash them so much as before, and thus they are gradually restored to fertility. If poor hill-sides are wanted for pasturage, they may be much increased in produc tiveness by planting out here and there the common white locust tree. It will improve the land and the quality of the feed in a very few years.

Finally, there are numberless methods by which our poor old farms may be improved, and that too, in a way that shall pay as the improvements proceed. I have taken up a subject that hardly has limits; but I will pursue it no further at this time. I will merely remark, that close observation, diligent study, and patient but strenuous industry, are the essential requisites to good farming in our older settled districts of country; and with these, the farmer need not fear any rivals, no matter from what quarter they hail. F. Holbrook. *Brattleboro', Vt., March* 4, 1850.

Improvement by Draining.

Underdraining.

Eds. Cultivator—The subject of draining does not as yet appear to be thoroughly understood by a great many farmers. They suppose that they have done all that is necessary in this matter, when they have furnished a furrow, or shallow channel sufficient to draw off the surface-water before it rots the seed, or scalds out a young crop of corn or other grain. I believe the want of suitable drainage, is the most common cause of the failure of crops; yet the disappointed husbandman is often seen looking around him in vain for some more remote cause, sufficient to produce the effect. We are familiar with the many causes assigned for the repeated failures of the potato crop; but any person who has observed the careless mode of cultivation adopted with this vegetable, will not hesitate to assign, as the original cause, the damp vegetable mould, so often selected for the potato patch. It has been a common practice with farmers to plant that portion of the field to potatoes which was too wet for corn. When we add to this, the fact, that the seed used, has been raised in the same way, and that the same process has been continued for many seasons, we need not be surprised at the result. It is more than probable that the rapid degeneration of grains, grasses,

vegetables and fruits, of imported varieties, is owing to a want of thorough drainage more than to any unfavorableness of climate. Orchardists have not failed to observe the poor quality of the fruits of acknowledged excellence, when raised on cold damp soil.

Not only the surface of the ground should be drained, but some plan must be adopted which will effectually remove all unnecessary moisture from the subsoil, to the depth of at least two feet. Open drains or ditches should not be entirely dispensed with. They are necessary to furnish a rapid passage for the surplus waters in the spring, and to prevent the flooding of cultivated fields by the overflow of upland swamps. An open channel is also necessary when some lawless brook is required to forsake the crookedness of his ways, and flow in a direct line. The smaller drains should be covered, to afford an unbroken surface to the plow.

A cheap method employed in Europe is as follows. An ordinary ditch is made about two feet deep and fourteen inches wide at the bottom. A channel eight inches in width and depth, is cut in the bottom of the ditch. A rope of straw slightly twisted, and of sufficient size to fill the channel, is placed in it; the earth is then shovelled in, and the drain is completed. The offsets between the two channels, are intended to aid in sustaining the superincumbent earth. The water will continue to filter through long after the straw is decayed. Could not the channel be filled with coarse clean gravel, as a substitute for straw?

If a larger quantity of water is to be discharged, a good drain may be made of pine or hemlock boards. Slit them to a suitable width, say nine inches, then with a common paint brush, cover them on both sides with tar and rosin melted together; nail them in the form of a prism, place them at the bottom of the ditch, and cover with earth, as already described. Or the passage may be made by placing a row of brick edgewise, on each side of the ditch, and cover over with a layer of brick placed crosswise, which would require one hundred bricks to the rod; or if a layer of bricks is required at the bottom, it would take 150.

The draining tiles lately introduced, are a decided improvement. Each farmer will of course decide upon the material to be employed,—whether wood, brick, glass, tiles, or iron. But let your fields be thoroughly drained by some method, as the first point to be attended to in successful farming, and then by careful plowing, improved manures and a proper succession of crops, you will receive the reward which the bountiful earth bestows upon *intelligent labor*. D. D. C. *Geneva, April*, 1850.

Draining.

EDS. CULTIVATOR—I am not ignorant of the use of *stone* and *tiles* in draining. Without meaning to decry the use of either, and admitting that, in some circumstances, they are the most eligible materials for this purpose, I yet wish to describe another mode with which I am familiar, and which I have practiced with great success. The main material of my plan is hemlock lumber, in the shape of board and scantling.

1. *The ground to be operated upon.*—My upland grounds are sandy, and slope off into a swamp with a clay and clay-gravel subsoil, which also probably underlays the upland, as, just upon the brow of the side-hill, the water oozes out from beneath the sand, making the low land very wet, since, from the nature of the subsoil, the surplus waters cannot subside readily. The object of my draining is to carry off the water from the side-hill across the low ground.

2. *General course of the Drains.*—I first made main drains from the hill, starting usually in some gully or natural ravine, and following the lowest ground, and so across the field. I tried to make other drains, intersecting these, and at nearly right angles, on the brow of the hill, but, from the spongy nature of the soil, I was only partially successful. Some of these last drains needed to to be tapped in the centre, by running a branch directly down the hill to the nearest point of the main drain, to prevent a fatal dripping down the brow of the hill.

3. *Mode of Construction.*—I dug my ditches from two to three feet deep, so as to have them below the frost and the subsoil plow. Sometimes it was needful, in crossing some point of land that made out into the desired course of the ditch, to dig much deeper for a short distance.

They were usually made about one foot wide at the bottom. Where the ground was soft, I frequently could dig but a rod at a time, before it was needful to lay the drain to prevent the sides from falling in. Occasionally it was convenient to begin the ditch at the upper end. Suppose a considerable portion of ditch dug, I laid my materials thus. If the ground were much descending, or the bottom were of loose sand or filled with sticks, I made it as level as possible and then laid down my boards, end to end fitting the ends pretty accurately. But if the ground were nearly level, and a firm clay or hard-pan, I used no board in the bottom. Upon this board or hard-pan I placed my scantling, which were sawed 2+4, and were set in the narrowest side. I was careful to have the scantling break joints with the boards, as this would prevent the work from settling unequally. These scantling were placed, for the widest drains, 6 or 8 inches apart, and for narrower, three or four. They were tacked at the ends with nails to hold them firm. The top board was then laid on, and nailed with about six nails if twelve feet in length. Care should be taken always to have the top board sound and free from bad shakes, as it has to sustain a considerable weight. The water way also should be carefully cleared of all sticks and loose stones. Where the amount of water is large, and especially when the drain descends a hill, I leave the ends of the scantling a half inch apart, and saw them off sloping, so that an orifice is left open pointing up hill. A grass sod should be laid close to the scantling below this orifice. In case the end of a drain is at a spring or bed of quick sand, it will be needful to guard it, otherwise some beds of quicksand will discharge large quantities of sand in a short time. This guard may consist of loose brush fixed firmly around the opening.

Generally, I take no pains to lead the ordinary water along the course of the drain into it, as it is sure to find its way through the chinks between the boards and scantling. Side drains are united to the main one by sawing out a few inches of scantling on one side of the main drain, and bringing up the end of side drain snug. Where a drain is laid deep, and in very heavy soil, I prefer not to throw back the soil just as it came out, but to mix muck with it to make it porous.

Results.—I have laid, during the last five years nearly two hundred rods of such drain, and have had but a single failure. That was of a side branch running down a steep hill. The meadow moles had dug in at the head during the winter under the snow, which melting in the spring, deluged the drain, and carried so much sand down to the junction as to stop it up. It was readily and cheaply repaired.

By means of these drains, I have reclaimed six acres of ground, some of which was a shaking quagmire, so that it is now good tillable soil.

Expense.—I make no estimate of expense. The price of digging will vary greatly with circumstances. The price of lumber will vary also with place.

Suppose the boards to average ten inches in width, they will, with the two scantling, make fifty feet of lumber, board measure, to the rod. The cut nails will cost but little. Nor is the work of laying difficult—less so, I think, than with any other material. The care of wise location, and of faithful and judicious construction, will be nearly the same, whatever be the material. When the lumber keeps wet, as it is likely to do in my case, it may be expected to last a great many years. My greatest trouble is with the meadow moles, which seem to choose the soil over the ditches on account of its deeper, dryer, and softer character, and because their prey is more likely to abound in such a locality.

In a country where lumber is cheap, I think this drain could be made more cheaply than any other, in permanently wet ground. It will be less liable to choke with sand than any other, and less liable to incidental injury from cattle, plowing, and the stroke of a crowbar, or the subsidence of the soil. And should the top-board, by any means be split and settle, it could hardly endanger the current of the water.

This drain, as every other, needs to be carefully watched at the mouth, lest it should choke with the sand, which will always flow down in greater or smaller quantities. C. E. G. *Utica, March*, 1850.

Bean and Pea Culture.

The Culture of Beans.

EDS. CULTIVATOR—At your suggestion, I give you my views of the bean crop, and my mode of cultivating it.

I appropriate to this crop my light land, either of gravel or sandy loam, from which I should not expect a full crop of corn; although it may be advantageously put upon land which will give 35 to 40 bushels of corn per acre.

I prepare the ground as for a corn crop; get the surface smooth by harrowing or otherwise, then mark it with a marker, making three or four marks at a time. I usually mark two and a-half feet apart, but have no doubt they will do well at two feet. I then plant with a drill-barrow, following the track of the marker, by which I get straight lines and uniformity of distance. I plant twelve to fourteen quarts of seed to the acre, which I find abundant. More would injure the crop, by making the plants too thick. I now use Emery's drill barrow with which the beans may be planted with almost perfect uniformity. That machine may be regulated to drop any quantity of seed desired, which I determine by trying it upon a smooth piece of ground or upon a floor. Three to four beans in a foot are enough.

The time of planting must depend on the locality; a frost after the beans are out of the ground destroys them. They will ripen in ordinary seasons with me, if planted at any time before the 8th of June; but the 20th of May would give a better crop, if they escape frost in the spring.

At the usual time of hoeing the first time, I turn my sheep upon them—if there is much grass or weeds among them—keeping a pretty strict watch upon them, turning them off as soon as they begin to take the beans, which they will not do until they have despatched the grass and weeds. They should not be turned in when very hungry, or they will take beans and weeds together for a while.

As soon as the weeds and grass have made considerable progress again, I again put on the sheep. By this time the beans are 6 or 8 inches high. I then go through with a double mould-board plow, so set as to throw the furrow on both sides well under the rows, or, which is as well, use a cultivator with a double share in front, and half shares in rear, on each side turning outward. This I have found sufficient cultivation. If the weeds come up again, I put on the sheep again, after which the beans will so cover the ground as to take care of the weeds themselves.

I let the beans stand until they get so ripe and dry that I can pull one day and thresh out the next, and often pull in the forenoon and thresh in the afternoon of the same day, which is better, as I avoid the risk of rain, which can hardly fail to injure them after pulling. I so divide my force as to thresh as I haul in, as they soon grow damp if heaped in the barn, and they then cannot be threshed clean without bruising. Care should be taken if they are not well dried in the field, to dry them after threshing. They should not be threshed in a machine, but with a flail.

A man will pull three-fourths of an acre in a day, and will haul and thresh about the same quantity. They are usually ready for harvesting by the middle of September. Frost does not hurt them after ripe.

I lay them in heaps as I pull them, as large as a bushel basket or less, and in rows far enough apart to drive a cart between.

The cost of the crop is about as follows:

Plowing, harrowing, and marking, per acre,	$1 75
Planting, with horse or man to draw machine, at say, 6 acres per day, at twenty-five cents,	25
Plowing or cultivating between rows,	30
Harvesting, including use of team, say,	2 50
Seed,	50
Add for contingences 10 per cent.,	53
	$5 83

The feed for the sheep is more than a compensation for turning them in and out. Light land will give from 12 to 25 bushels per acre, depending upon the season and fertility of soil. The price of a good article is from $1.12½ to $1.50 per bushel. The small round bean, called the "*pea bean*," is preferred in market.

If some are not fully ripe at harvesting, they must be thoroughly dried, or they will be discolored and injure the sample and the price. And as it is difficult to dry them on the ground, from risk of rain, which will be sure to injure them, more or less, I thresh them so lightly as to leave the green ones in the straw. I take care to save the straw, which I feed to cattle. Sheep are fond of the dried pods, but will not eat the straw as well as cattle. If harvested as soon as ripe, the straw, if well taken care of, will pay one-half the cost of cultivation.

The bean sends its roots deep in the ground, and exhausts the soil less than almost any other crop. Through its broad leaf, it draws largely upon the atmosphere for its growth. I have found a sensible difference in favor of the crops following beans, over those following grains. S. CHEEVER. *Bemis Heights, Saratoga County, March*, 1850.

The Culture of Peas.

EDS. CULTIVATOR—In the northern section of our country, we consider peas a profitable crop. We deem them a highly nutritious food for animals, and

reckon them worth as much per bushel for fattening hogs, as corn. The crop leaves the ground clean and mellow, furnishing an excellent preparation for other crops, especially wheat. We sometimes sow them with oats, in the proportion of one-third peas to two-thirds oats. The peas and oats, ground, are excellent food for horses, cattle, sheep or swine. A variety of peas which has rather a light vine is preferable, as the ranker kinds are apt to overrun the oats, and lay too close on the ground, but the straw of the oats will hold up the lighter ones, so that both the oats and peas will fill well.

A loamy soil, rather inclining to clay, is best adapted to peas. Early sowing generally gives the best crop. Very hot weather is unfavorable to their filling, and it is hence advisable to have the crop well advanced before the hottest part of the season comes on. A sod which was plowed the previous autumn, well harrowed, makes a good bed for peas, but any good sward, well broken up and mellowed, will answer—and if sod ground cannot be had, that which has been under cultivation one or more seasons may be taken. No manure is generally needed; but if any is put on, it should be a small quantity of that which is thoroughly rotted, spread on the furrow and harrowed in. A large quantity of manure, or that which is in a green state, makes too great a growth of vines and tends to blight.

The quantity sown per acre varies somewhat with the kind of pea, some being of a more spreading growth than others, and requiring less seed. It is usual also, to sow a larger quantity of very large peas, than of small ones, because the number of peas or germs is greater in the same measure of small ones. The large marrowfats, for instance, are double the size of some others. From three to four bushels of seed per acre is the quantity usually sown.

The covering of the seed is best performed by a small plow, or by a cultivator. It is difficult to bury peas with a harrow, many being always left on the surface, where it is attempted. A depth of about two inches is the proper one for covering. A good way is to pass the harrow over the field after the peas are sown, which will prevent them from rolling into rows or bunches, and then plow them in with a shallow furrow. The varieties adapted to field culture are the Canada field pea, the marrowfat, and the black-eyed pea. The yield on good soil is from twenty-five to forty bushels per acre.

To destroy the pea-weevil, or bug, which in some sections is so troublesome, immerse the peas in water, boiling hot, for two minutes; then take them out and mix plaster, dry ashes, or slaked lime with them, till they will separate in sowing or planting. No fears need be entertained that the hot water will prevent the peas from vegetating—not one in twenty will be hurt at all. T. M. *Essex county, N. Y., March,* 1850.

PARSNEPS FOR PIGS.—The *Sussex* (Eng.) *Express*, says, "at our farm we have been in the habit of employing parsneps for this purpose for some time. Upon reference to our books, we find that on the 11th of October, 1847, we put up two shoats of eleven weeks old, and fed them on skim milk and parsneps for three months, when they were killed, weighing 231 and 238 pounds. They were well fattened, firm in flesh, and the meat of excellent flavor. The quantity of parsneps consumed by them was nine bushels each.

☞ If a man could have half his wishes, he would double his troubles.

Vegetable Physiology.

Motion of Sap in Plants.

EDS. CULTIVATOR—I herewith send you some thoughts and facts upon the flow of sap, which were addressed to me by a respected friend,—a man of science, who has given to nature a wide observation. I have read his manuscript with much satisfaction, and think its publication in *The Cultivator* would afford equal pleasure to other readers. F. HOLBROOK.

Motion of Sap. Not circulation—suspension in winter—in spring, what causes its ascent—peculiarities of different plants, as birch, butternut, beech, oak, sugar-maple and grape—wonderful.

In the human body, the *arteries* carry the blood from the heart to the extremities, and there, *veins*, beginning in extreme minuteness, take up the blood and return it to the heart. In the arteries, the blood is passed by pulsations; in the veins, it flows with a slow and insensible stream. From the blood is taken out, at the extremity of the arteries, the portion necessary to nourish the body; in the veins flows the unused blood, which is mixed on its way, with the wasted and lifeless matter taken up by the absorbents from every part of the system; and the venous mass is thrown by the heart through the lungs, to be purified and fitted for its object. This is a real *circulation* of the blood.

In plants, there are vessels in the outer part or wood, to carry the sap into the leaves, or to the surface of leafless vegetables, where the sap is formed into *latex* or nutritious matter; which then is passed down the vessels in the inner bark to be conveyed by the *medullary* rays inwards through the wood, and even into the pith, to support the whole by its nutriment. There is not a real circulation of the sap.

By the vital operations of the plant in summer, the leaves and stems are gorged in autumn with nutriment; the absorption by the roots and leaves is diminished; the evaporation from the plant diminishes, and less is absorbed by the roots; the motion of the sap slackens, and finally nearly ceases in winter, as the requisite compounds have been produced in the plant. The vegetable world nearly suspends its operations in winter, as if resting in preparation for the active energies of spring and summer. The elaborated sap or nutriment has merely descended to its needed places, and wood, starch, oils, gums, &c., have been formed. No descent of sap into the roots.

In the autumn and winter, the roots have shot out new *radicles*, terminated by a sort of mouths, to take up the matter, that is, the sap, from the earth. In the sugar maple this sap is sweet.

As the frost is leaving the earth, activity is seen in the roots, and the sap ascends through the plant, even to the buds, which are to form the leaves and flowers. The immediate cause of the ascent is not understood. The heat and light stimulate the buds into action, which uses up the contiguous sap, whose place is supplied by the ascent from below.

Besides this, there may be another reason, viz: the expansion of the vessels, enlarging the spaces, and more than all, the operation of *life*, whatever that is.

Some kinds of wood are more compact in winter than in summer. The observing farmer long ago found that a barn floor of frozen and green hemlock plank will be more close than the one put down from the same plank, unfrozen, in summer. The frozen

plank, full of sap, evidently enlarge as the frost leaves them, and they continue to expand by the heat.

This contraction when frozen, and expansion by warmth, is always transverse and never lengthwise. In length, green and seasoned timber, fit and preserve their fitting, when mixed in a frame, perfectly well.

There is a great difference in trees, and shrubs, and herbs, in their bleeding, as it called, when cut, and that difference is not yet explained. Cut off a twig of Lilac, Poplar, Elm, Oak, Pines, White Birch, &c., and very little sap will flow out in the spring, or at any season. Cut off a twig of some grapes, and the sap will flow in profusion in May and June. Cut down a Yellow Birch in winter, and no sap will flow from either part; but, when the frost is wholly out of the ground, that stump will throw out a great quantity of sap, containing no sugar, for many weeks. The activity is in the roots alone, for the trunk and leaves are not there, nor any expansion above to lead up the sap. It is the activity of life. The stump of the oak, elm, beech, &c., operate not at all in this manner. But, if an incision is made in the trunk of a Yellow Birch, while the stump of the other is flowing, sap will issue in abundance from the incision, and only a part will ascend into the limbs.

If the Butternut is tapped when in frozen ground, the sap flows abundantly till the ground is thawed, when it wholly ceases. This tree is late in the spring, in showing any action in its buds. The life in the roots would seem to be the moving power. It is well known that this sap yields a bitterish sugar, having the butternut taste, and quite cathartic. A coloring matter, rather nauseous, is also in it.

The Sugar Maple, being tapped, sends forth abundance of sap when the ground thaws by day and freezes by night. If the freezing does not occur for two or three nights, it yields no sap; but if the freezing occurs, the sap runs abundantly. Hence, if a snow falls at this time, and the cold affects the earth to freezing, so great a rush of sap follows, that this is usually termed a *sugar-snow*. When the freezing ceases, the sap no longer runs from the orifice or incision, but there can be no doubt it flows from the roots to the extremities of the tree in profusion.

When a root of the Sugar Maple is cut in the time of the running of the sap from an incision, the sap flows out from both ends of the severed root and its severed parts. This fact has been lately proved by actual experiment, and the sap from each part found to be sweet.

When an incision is made in the maple in sap time, the sap flows chiefly and nearly entirely from the upper side of the cut. This proves that it is the sap, already ascended into the trunk, which runs downwards and outwards by the incision. Does not the freezing of the ground compel the sap upwards into the tree, and detain it there so that it can be discharged by descent to the cutting made in the tree?

Cut off a twig of the common cultivated grape after the frost is out of the ground, and like the Yellow Birch, the sap will run for weeks. A tube has been fastened tight around the cut part, and the sap flowed to the height of twenty feet in the tube. In this is seen again the operation of that mighty principle, *life*.

These differences are great and wonderful. How little is known yet of the causes of diversity. The subject is worthy of experiment and observation, only let there be *care* and *certainty*. SACCHARINE.

Neglected Manures—No. 5.

Bones, Ivory Dust, Horn, Wool and Hair.

ANALYTICAL LABORATORY, YALE COLLEGE,
New-Haven, Conn., April, 1850.

EDS. CULTIVATOR—In addition to the method for dissolving bones by means of sulphuric acid, mentioned in my last letter, I ought here to say a few words respecting a new process for reducing bones, which has attracted a good degree of attention in England. Steam is the agent employed. A boiler is made for the purpose, capable of bearing a pressure of from 30 to 40 pounds per square inch; in the lower part is the water box; this has a floor above, on which the bones are placed, and exposed to the action of the steam. According to the method which seems most advisable, a pressure of 25 to 30 pounds of steam is given for 24 hours. At the expiration of this time the charge is withdrawn, and the bones are found to be in such a state, that they can easily be crushed to a fine powder with a mallet.

This powder is said to produce remarkable effects upon turneps and other crops, even when applied in quite small quantities. By the continued steaming, every portion of the bones is brought into a very readily decomposable state, so as to be available at once for plants. The water which remains in the boiler, has a certain portion of gelatine from the bones dissolved in it, and of course should be saved, for sprinkling over the land as a top-dressing, or to mix into a compost heap.

In order to prevent the gelatine from decomposing, and to avoid the consequent loss of ammonia that would ensue, it is recommended to mix salt with the powder before it dries. This also, in most cases, materially increases the value of the manure because it adds still another ingredient to the soil.

The effects of this manure have not as yet been fully tested, in comparison with the other forms of bones mentioned, but during the coming season there will probably be extensive experiments. I have mentioned it here, that farmers may know what is meant by steamed bones, and may appreciate any results obtained by their use.

I have lately had some of the ivory dust from comb factories, sent in for examination; it has been analysed by Mr. Crane, one of my assistants. He found it to differ in composition from ordinary bone, as to its amount of phosphates. The following table gives the result of Mr. Crane's analysis, as compared with two by Dr. Thomson, on other classes of bones.

	Bones of a Sheep.	Bones of a Haddock.	Ivory Dust.
Organic matter, or gelatine,	43.3	39.5	37.7
Phosphate of lime,	50.6	56.1	56.1
Carbonate of lime,	4.5	3.6	3.9
Carbonate of magnesia, with a little potash and soda,	1.4	1.6	1.5
	99.8	100.8	99.2

This agreement in the composition of ivory with that of dried fish bones was quite unexpected to me, and is really very remarkable. In both, there is considerably more phosphate of lime present than in other bones, and their value as permanent manures is of course greater. The above is one of those singular coincidences that we often find in chemistry. It would not be supposed that ivory, so compact and so hard, was so positively identical in its composition with soft and brittle fish bones.

The ivory dust of the comb, and other factories, where it is produced, is an extremely valuable manure. It is already reduced to a fine powder, and

is therefore much better for plants, just as bone dust is. This dust is also easily dissolved by acids if necessary, a much smaller quantity effecting the solution, than is required for the whole bones.

I have heard in one or two cases, complaints that this manure, and other forms of bones, injured the land after a time, but found on inquiry that the evil was produced not by using bones alone, but by not using at the same time other manures. Phosphoric acid and lime are valuable constituents of a soil, but they are not all that it needs. The farmer who cultivates judiciously will supply *everything* that is necessary, and not attempt to keep up his soil by giving it two or three only, of the numerous substances required. If farm yard manure in moderate quantity, had been applied with the bones, no injurious results would have been experienced.

Still another form of manure, which resembles bones in its composition, is horn. This, according to some examinations which I have made, contains when dried, about 40 per cent of phosphates. Horns are nearly indestructible in the soil, and cannot well be ground in mills, from their softness and toughness. The proper way to treat them would be with sulphuric acid, or to powder them by the steaming process mentioned above. In either case, they would make a most valuable manure. Near many factories, there are large quantities of horn shavings to be had, and they should always be secured at once by the farmer as an article of much value. Their decomposition in the soil is quite slow, but their effect is powerful, and of course quite lasting.

For fear of surfeiting my readers with various forms of bones, and the virtues of phosphates, I will now pass on to some other class of fertilizing substances, that are suffering under unmerited neglect. Unfortunately, these are not difficult to find in almost any part of the country.

One of the manures most highly valued in England and in Europe, is found in hair and wool. These are of similar composition. They contain but little ash, only from one and a-half to about two per cent. This ash consists chiefly of chlorides and sulphates of potash and soda, with small quantities of phosphates. Sulphur is a substance which exists quite largely in these parts of the animal, amounting usually to about five per cent.

From the small proportion of ash, it is evident that we must look to the organic part, in explaining the remarkable effect which these manures produce under nearly all circumstances. On analysis of this part, it is found to be particularly rich in nitrogen, containing about 17 per cent. This is sufficient at once to determine its value. Much of our ordinary farm-yard manure does not in its whole bulk, contain more than three or four per cent of this body, and yet it has a great influence in enriching the soil.

How much more powerful must this class of manures be, in which is four or five times as much nitrogen as in barn-yard manure. The farmer is always safe in concluding that a substance, in whose composition an analysis shows more than eight or ten per cent of nitrogen, is a very valuable and concentrated manure; always provided of course, that it contains nothing beside likely to be actually hurtful in its nature. When the per centage of nitrogen ranges as high as in the present case, about 17 per cent, he may rest assured that he has found a manure of the most powerful description at present known.

So far as my information extends, hair, refuse wool, and all substances of a like nature, are almost entirely neglected in this country. I have known of many cases, where they were completely thrown away. In the neighborhood of woolen factories, for instance, all the refuse and waste of the mills is of great value as manure. Besides the natural constituents of wool, it is saturated with oil and grease, which increase its fertilizing power.

This refuse does not of course contain as much nitrogen as the clean wool, or hair would do, owing to its admixture with dirt and other foreign substances. Some recent analyses by Prof. Way, of the Royal Ag. Society, show that in the better samples, there is ten or eleven per cent. These cost in England from $15 to $20 and sometimes $30 per ton, and are found a very profitable application at such prices. The demand there is so large and constant, that it has led to adulteration in various ways; linen and cotton rags, or clippings, among other things, are mixed with the woolen. Prof. Way found that some samples which appeared well to the eye, were really not worth more than from $4 to $8 per ton, in place of $20 or $30.

Woolen rags decompose very slowly in the ground, and for this reason, disappointment is experienced in their effect on crops that require a speedy and powerful fertilizing action. They are most used for the winter grains, and for other crops that occupy a long period in their growth. The hop-growers of Kent and other counties of England, rely on woolen waste, and rags, as one of their most important manures; they bury it under the hop vines, and the influence continues in a most efficacious manner, for a number of years.

In some situations, hair of various kinds may be procured, and should always be carefully preserved; its composition being, as noticed above, the same as that of wool. I noticed in North Lincolnshire, England, an application of what they called cony dust. In clipping rabbit skins to obtain the fur for hat bodies, there is much waste of hair, and this with clippings from the skins, is swept up and sold at a high price, under the above name. It is used for turneps on light soils, at the rate of from 10 to 20 bushels per acre, and produces excellent crops. In the instance that I saw, they were dropping it in the bottom of drills.

Where the refuse hair from tanneries could be obtained, it would also be an excellent manure; the lime which is usually mixed with it adds to its value, though making it decompose much more rapidly.

I have now, perhaps, said enough to call attention to this class of manures, and to convince farmers of their efficacy. They are not within the reach of all, and those who are in a position to obtain any of them, will, if they understand their own interest, take steps to prevent any further waste, by securing as much as possible for the enriching of their own fields. JOHN P. NORTON.

The Veterinary Department.

Ringbone in Horses.

EDS. CULTIVATOR—In answer to your inquiry concerning ringbone, we define it to be an exostosis, or bony tumor, originating from a bone. It is situated on the small pastern, (called *os corona.*) between the shell of the bone and the periosteum covering it. Sir A. Cooper calls a tumor of this nature, *cartilaginous exostosis of the periosteum.* "It originates in a deposition of cartilage, of a very firm texture, and similar to that which forms the nidus of bone in the young subject. The periosteum adheres to the external surface of the swelling

Thus, on dissection, we discover—1st. The periosteum thicker than natural; 2d. Cartilage immediately below the periosteum; and, 3d. Ossific matter deposited within the cartilage, extending from the shell of the bone nearly to the internal surface of the periosteum, still leaving on the surface of the swelling a thin portion of cartilage unossified.

Consequently, when ringbone has been formed in this manner, the shell of the original bone becomes absorbed, and cancelli are deposited in its stead. In the latter stages of ringbone, (provided the natural process has not been interrupted by the firing-iron, &c.) the outer surface acquires a shell resembling that of the bone itself. A ringbone is composed of a cartilage for its basis, and an earthy salt or phosphate of lime. This fact may be easily demonstrated by steeping the bone in acid, for by this means, it is deprived of the phosphate of lime, and the cartilaginous structure remains of the same form and magnitude as the diseased deposits.

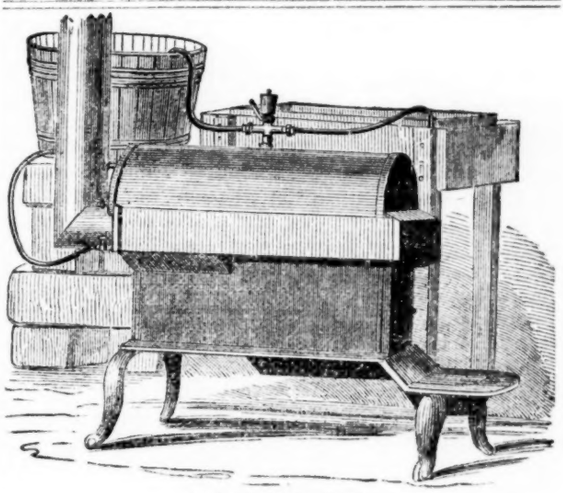
So long as a ringbone is confined to either of the pastern bones, it is of little consideration; for it does not occasion much inconvenience to the animal; but should it show itself near one of the joints, it seldom fails to produce lameness, which is often of a permanent nature. When this disease invades ligamentous structure, lameness generally accompanies it, probably on account of the tenderness of the parts. Ringbones, splints, spavins, and other bony depositions, though of great size and quick growth, are often unattended with lameness. I never knew of any "bladder" to be found in the situation alluded to by your correspondent. There are in the region of tendons small bursæ, or sacs, formed of a tendinous expansion, and lined by a membrane similar in its texture to the synovial membrane of a joint; which like it, secretes and contains a fluid resembling the white of an egg; this fluid facilitates motion between parts moveable on each other, by preventing friction; how this "bladder" can "feed ringbone," I cannot conceive; for windgalls, which are nothing more or less than enlarged bursæ (situated at the lower part of the canon, or shank-bone,) exist for years without any enlargement of the bone. "Mr. Cole recommends the extraction of the bladder." I had the pleasure of a visit from that gentleman this morning, and he stated that the article referred to was compiled from a work on that subject, without any personal knowledge of his own; I showed him several specimens of bony deposits, and he feels satisfied that my definition is correct.

Various remedies have from time to time been resorted to for the cure of ringbone, and without success. I know of nothing that tends so much to produce absorption and diminish lameness, as counter irritants. The removal of ringbone by an operation, has been performed, yet such an operation requires much skill, and where there is no lameness, and the only object is to get rid of an eyesore, it had better not be attempted. G. H. DADD, V. S.

Spaying Cows.

EDS. CULTIVATOR—As there are many inquiries relative to the best time for spaying cows, I would answer, not less than twenty days after calving, and any time from the first of April to the middle of June; and heifers at any time excepting in the extreme hot weather in summer, and at any age from three days up to twenty years, when intended for beef. Any further inquiries, either by letter or through *The Cultivator* on the subject, will be promptly answered. WILLIAM C. CARTER. *East Bloomfield, March* 2, 1850.

The Dairy.



Dairy-Steamer.

The above cut represents Farmer's Dairy Steamer, an apparatus for heating milk in the manufacture of cheese.* It consists of a boiler for the generation of steam, attached to a stove or furnace. A pipe is attached to the boiler for conveying the steam to the vessel where the milk is heated. The milk is contained in a tin vessel, and this vessel is placed in a wooden vat of such dimensions as to leave a space of two inches at the bottom, sides and ends. This space is filled with water. When the milk is heated, for the application of rennet, the steam-pipe is let into the water, and the steam let on and continued till the milk is warmed to the required degree, which should be ascertained by plunging a thermometer into it. Dairymen are not exactly agreed as to the degree of heat to which milk should be raised; but none recommend less than 82° or more than 90°.

The use of an apparatus similar to the above, has been adopted in some of the largest dairies in this state, and is much approved. Mr. A. L. FISH, of Litchfield, Herkimer county, has highly recommended this mode of heating milk. See *Cultivator* for 1848, p. 153, and for 1849, pp. 154, 183.

One great advantage of this process is, that the heat is equally diffused through the whole mass, without any portion of it being exposed to an excessive degree. Mr. FISH observes—"The more water there is in the larger vessel, the more uniform heat is conveyed to the milk." The size of the tin vat for containing the milk has been given as follows:—For a dairy of 30 cows, 2½ feet wide, 6 feet long, and 19 inches deep. The night milk is strained into the tin vat, which is surrounded with cold water, in order to keep it properly cool till next morning, when the morning milk is added, and the water heated by steam for "running up" the curd.

A branch of the steam-pipe is connected with a tub or vat for heating water for washing utensils, &c., used in the dairy.

Premium Butter.

The statements of the competitors who received the highest premiums on butter, at the last exhibition of the N. Y. State Ag. Society, furnish, perhaps, as good information as we can give, in answer to several inquiries concerning the best mode of butter-making. We have therefore prepared the fol-

*For particulars in regard to this steamer, address G. FARMER, Herkimer, Herkimer county, N. Y.

lowing article from the forthcoming volume of the Society's *Transactions*.

For the best fifty pounds of butter made at any time, the first premium was awarded to HORACE CLAPP, of Houseville, Lewis county. This butter was made on the 5th of September. The number of cows belonging to the dairy is forty, and the average product of butter for each cow for the season, is 165 lbs. The milk usually stands from 36 to 48 hours, according to the weather, but is skimmed before it turns sour; the temperature of the milk-room ranges from 58 to 62 degrees. The cream before churning is kept in a tin vessel, made for the purpose, and is set upon ice to cool to the proper temperature for churning—55 to 58 degrees. The butter is worked with a "butter-worker," which is considered preferable to the hand. The Bonaire ground salt is used at the rate of six pounds to a hundred pounds of butter, during warm weather, and somewhat less in autumn. No saltpetre, or any substance but salt, is mixed with the butter. The mode of keeping butter in summer is to lay it down in tubs, leaving space at top for half an inch in thickness of salt, which is laid on, moistened with strong brine, and kept moist during warm weather.

The cows are of the common stock, crossed to about one-fourth blood with the Short-horned breed. They are fed with hay only in winter, and grass in summer; they have access to salt at all times.

For the best twenty-five pounds of butter, made in June, JOHN SHATTUCK, of Norwich, Chenango Co., received the first premium. He keeps twenty cows. The milk is strained into tin pans as soon as drawn, and kept on racks in the milk-room, until the cream is removed, which is always done in warm weather before the whey appears, and in cool weather before the milk begins to turn bitter. The cream is kept as cool as possible after it is taken from the milk, and the sooner it is churned the better. Churning is done every morning in warm weather, tempering the cream with ice, so as to have it gather well and hard, in which state it is readily freed from the butter-milk. In warm weather ice-water is used to rinse the butter when it is removed from the churn; the butter-milk is worked out clean, and the butter salted with ground rock-salt, at the rate of one pound to twenty pounds of butter. After it is thoroughly worked, it is set in a cool place about 24 hours, when it is again worked so as to entirely free it from the butter-milk; then pack it in a firkin, which is covered so tight as to exclude the air, until the firkin is filled. Nothing but salt is mixed with the butter. For keeping through the season, cloths are spread over the butter in the firkins, and strong brine, made of rock-salt, is poured on.

For the greatest amount of butter made from five cows in thirty days, JOHN HOLBERT, of Chemung, Chemung county, received the first premium, and NELSON VAN NESS, of Mayville, Chautauque county, the second. Mr. H.'s cows yielded in thirty days, (from May 23d, 1849,) 264½ pounds, or an average of 52 pounds 14 ounces per cow—and those of Mr. V. N., 221 pounds—or an average of 44 pounds 3 ounces per cow. Mr. H.'s cows were of common stock, with a "slight mixture" of the Short-horned breed. Mr. V. N.'s were entirely of the common stock. Both herds were fed on grass only.

PROFITABLE DAIRY.—GEORGE W. GOODNOW, of Southborough, Mass., gives an acount in the *Mass. Plowman* of the produce of twelve cows kept by him during the last year. From the first of March to the first of December, he sold 2287 lbs. of butter, for which he received $524.79—butter consumed in the family during the same time, was worth $29.94—milk sold, $77.76—calves sold, $70.71—making a total of $703.20.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Summer Management of Young Trees.

In answer to frequent inquiries, it may be stated that the first and great requisite in the successful treatment of newly transplanted trees, is to keep the surface of the soil for many feet around them clean and mellow by cultivation. This is important to all kinds of trees, but especially so to the peach. An instance occurred where a young peach orchard stood the first year in a clean and repeatedly cultivated potato field, and the green shoots on all the trees at the end of the first summer measured from a foot and a half to two and a-half feet in length—on an adjoining uncultivated piece of land, none of the shoots were three inches long.

A great mistake is often made by watering the roots of newly set trees, before the leaves expand, by which they become water-soaked and killed. A leafless tree is in a nearly dormant state, and throws off but little moisture. But as soon as the leaves expand, they exhale moisture rapidly, and a supply is then needed at the roots. Watering, however, usually fails of the intended purpose. The water is poured on the top of the ground, and only serves to bake the surface, without ever reaching the dry soil further down. If watering is actually required, the surface should be first removed, and the water then poured in directly on the roots, replacing the removed earth. An acquaintance who set out last year about 60 cherry trees, lost every one which was watered on the surface, consisting of about one-third of the whole.

If trees have been dug up carefully and with uninjured roots, and then well transplanted,—in the first place; and the soil kept mellow as already stated, in the second; they will usually have made so good a growth by midsummer, as to be beyond the danger of drouth. But if the transplanting has been badly done, or the soil has been allowed to get hard, the careless cultivator will doubtless be reminded of his negligence by the death of a part of his trees.

Watering a feebly growing tree, is at best but a very irregular way of supplying it with moisture. A greatly superior protection from midsummer heat and dryness, is *mulching*, or covering the surface of the earth for some feet round each tree with hay, straw, or other litter, several inches in thickness. This covering keeps the ground soft and moist, and night dews are retained in the soil through hot summer days. During the excessively dry season of last year, a row of newly set apple trees, standing on a high and dry piece of ground which could not be easily cultivated, were observed to cease growing, and the leaves to assume a yellowish cast. They were immediately *mulched*. In a few weeks, they re-commenced growth, and the leaves returned to a dark healthy green, although no rain had fallen during all this period.

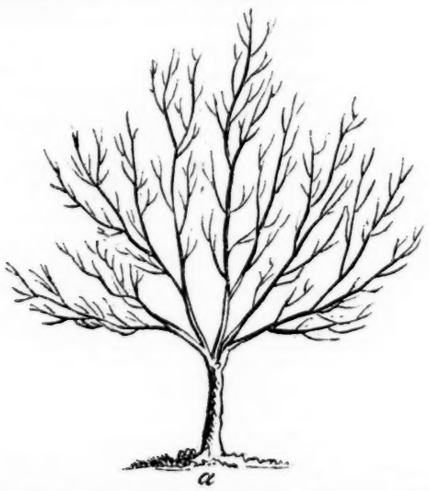
Cherry trees, which in spring or early summer, give strong promise of a flourishing growth, are frequently destroyed by a parching midsummer's heat. To such, mulching is of eminent service.

Mulching is not usually advisable for young trees after the first season from transplanting, unless their

growth is feeble. As soon as the growth is sufficient to give the tree strong and well established roots, whether it be the first or second year, clean and mellow culture is the best treatment which a tree can receive.

Pruning the Peach.

A correspodent says, "I have noticed that much is said about shortening-in the shoots of peach trees, commencing young and continuing annually—but I wish to know what to do with my trees, now seven or eight years old, and which have never been pruned. Will it do to cut them after the leaves have begun to appear, as has been asserted?"



We have found great advantage in pruning back the peach, even when the trees have been long neglected. A case once occurred where an old tree was greatly improved by the rough and random trimming it received from the tempest, which swept away a part of its limbs.

The treatment which an old or neglected tree receives, must be somewhat different from the annual shortening-in of young shoots. It becomes necessary to shorten-in on a larger scale, and with a freer hand. Even three or four feet may be taken off at a stroke, where the form of the tree appears to re-

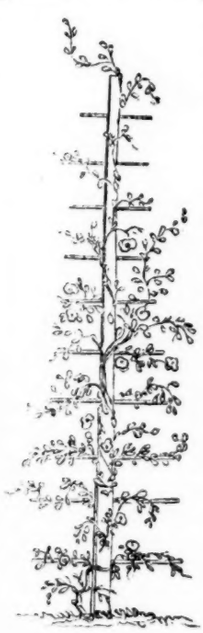
quire it. We have found such treatment, when judiciously performed, often to double the size of the fruit, and to improve astonishingly the flavor. The above figures may possibly be of use, in pointing out more particularly the mode of performing this kind of pruning; *a* representing a common, well-grown, unpruned tree, and *b* the same, with such branches as may be cut away indicated by dotted lines.

In connection with pruning, it is quite essential to give the trees a good mellow soil by cultivation, and if needful to enrich it by manure. Pruning alone, is insufficient to restore a neglected tree. With the two combined, those not actually enfeebled by old age, may be made to send out new and strong shoots, and to acquire the vigor of young trees. Their duration, with subsequent annual pruning, will be greatly increased.

The pruning of the peach may be performed, apparently, quite as well, after the leaves are partly expanded, as early in the spring—such, at least, is the result of several experiments. In the more northern states, it may therefore be accomplished during the early part of the present month.

Supports for Runners.

Small or slender climbers, as the Cypress-vine and other Ipomeas, the Madeira vine, Aristolochia, &c. present the best appearance when supported on a light frame, with some symmetry or regularity of appearance. Some of these frames were figured in our first number for this year. More irregular or rampant climbers may be borne aloft on a post with holes cut through it at intervals, for the passing and repassing of the flexible stem with its thickly clustered branches. A still more wild and irregular appearance is obtained by setting, as a post in the ground, the stem of a cedar tree, with portions of its larger branches left to support the climbing verdure. Both of these supports were figured in this paper last year. Some difficulty has however been felt. The single post requires some care and skill to cover it properly; and the armed cedar post is not always easily procured. In its absence, the following is a good contrivance. A single post is planted with horizontal arms fixed in holes bored for this purpose, as shown in the above figure. More irregularity is obtained by placing these arms alternately at right angles with each other. No nails are used in this support; it is firm and strong, and if made of durable wood, will last many years.



Curious Insect-Catchers.

The following very interesting fact is stated in S. B. Parsons' New Haven Address, where he urges the importance of employing various animals for the destruction of insects, as the ferret is employed to destroy rats:—"I recollect visiting some years ago, an intelligent physician in the West Indies, who had trained some lizards to take the flies from his face when asleep. To show me their skill, he leaned his head against the side of the summer house, closed his eyes, and immediately, half a dozen bright little fellows, three or four inches long, appeared near him. Their glistening eyes twinkled with expectation, and the moment a fly made its appearance on any part of the Doctor's face, one or more of them would dart like lightning across his face, scarcely touching it, but carrying off the unfortunate fly." The same Address further states that "a French agriculturist had a hundred pairs of the bird called

Kuikimanore, from the Sandwich Islands. During the season, he would let them loose at night and they would return in the morning, each pair destroying, as was estimated, some four thousand May-bugs. In Malta, small birds are kept to free the house of flies during the summer, and are found very effective."

Strawberry Culture.

An intelligent friend, residing at Palmyra, N. Y., has furnished us the few following notes of a visit to one of his neighbors, remarkable for his success in the cultivation of the Strawberry, and celebrated for the enormous size and productiveness to which he has brought different sorts as they have successively passed under his hand. Whatever may be thought of the utility of large doses of cold spring water, one thing is certain, he has far outstripped all other gardeners in his vicinity, in his large, thickly trussed fruit:

"A very rainy day suggested to me to drop in and spend an hour this afternoon with him and his social wife, who together live almost excluded from the world without, except by books and papers. For many years he has been remarkably successful with strawberries, and although he has cultivated one kind for two or three years, and then replaced them by another kind, and then again by another and still another, yet somehow he manages every year, no matter what kind he has in cultivation, to astonish us all by his enormous crops of fruit.

"During the past three years he has given his almost sole attention to the cultivation of Hovey's Seedling, yet contrary to usual theory and practice, he firmly refuses to allow a single staminate plant to remain in their vicinity. Besides, the last season, he allowed all his strawberries to cover the ground completely with runners, and yet from the many neighbors and others abroad, who visited his garden during the fruiting season, not a man could be found who had ever seen it excelled either in the extraordinary size or quantity of fruit, in any kind of strawberries. Not a foot of ground, or apparently a single plant, that was not covered with large and perfect fruit. Some days he picked two or three bushels, and could have picked much more.

"One bed was on the lower end of his garden, where I should think it might be a deep soil; but a smaller bed near his house, is on about six or eight inches of good soil over a stiff hard-pan, yet this bed has borne during the past two years, at least as large fruit and as great quantity, as the most favored portions on the deeper soil below.

"Now it may be curious perhaps to inquire, what is the secret of all this? for I have been very careful to state only such things as I know to be facts. In answer, I would say after a close observation for a number of years, I am convinced it can be summed up in a single line, to wit,—*Select good plants,—give them clean culture,—and plenty of cold* HARD *water.*

"The importance of clean culture every one understands, but my friend is a little peculiar in his hydropathic views. He believes, from the careful observation and experience of half a century, that *hard* water is far better for plants than *soft* water —that the lime held in solution is evidently useful to them*—and also that plants may be *trained* to receive cold water at all hours—hence he accustoms his strawberries to take a cold bath from the well at mid-day in the face of a hot summer's sun *without shrinking*. In a dry hot time he will give, twice a day, every four or six feet square of his strawberry bed, a pailful of clear cold water."

* If the mineral substances held in solution possess fertilizing power, the experiment may succeed quite differently, so far as these affect its results, in different regions of country, where, on account of geological distinctions, these dissolved manures may be very unlike. —Ed.

Varieties of the Garden Pea.

Last year experiments were made in the garden of the London Horticultural Society, on many varieties of the pea, obtained from different cultivators, for the purpose of comparison, and testing their relative merits. The results have been published at length, which we here present in a condensed form, embracing the principal facts. The sorts were all sown on the 21st day of 3d month (March.) The color refers to the peas when dry.

Thompson's Early Dwarf—fit for use, June 28—height 2 ft.—pods, small, round, with 4 to 6 peas—white. Tolerably prolific.

Bishop's New Long Pod—June 28—2 feet—straight, cylindrical—6 to 7. Excellent, early, prolific. Far superior to Bishop's Early Dwarf.

Prince Albert—June 20—3 feet. Resembles Early Kent and Early Frame, but one week later. Early Warwick and Early Race-Horse, generally proved to be Early Frame.

Lady's Finger—July 4—5½ to 6 ft.—long, cylindrical—6 to 7—white Good, moderately productive

Early Hero—July 6—5 to 5½ ft.—slightly curved—6 to 7—white. Peas medium size, good.

Shilling's Grotto—June 27—4½ to 5 ft.—thick, short, badly filled—1 to 6—white. Bad bearer.

Dwarf Branching Marrow—July 2—2 ft.—nearly straight, flattish—6—white. Moderate bearer. Stalk strong, short-jointed, leaflets broad, flowers large, cream-colored, peduncles short. Grimstone's Egyptian, found in an ancient Egyptian vase, (?) proved identical with Dwarf Branching Marrow.

Queen of Dwarfs—July 20—18 inches—large, flat—4 to 6—large, white. Moderate bearer.

Bellamy's Early Green Marrow—June 30—4½ to 5 ft.—long, straight, cylindrical—6 to 7—green or white. Good bearer, excellent.

Sutton's Superb Green Marrow—July 14—5½ to 6 ft —flattish, nearly straight—6—large, green. Slightly harsh, moderate bearer.

New indented Green Marrow—July 18—5 feet—(resembles Knight's Green Marrow.) A good pea.

Victoria Marrow—July 24—6 to 6½ ft.—nearly 4 inches long—generally in pairs, straight, roundish—6 to 8—green. Good.

Flack's New Large Victoria—July 2—2½ to 3 ft.—flattish, nearly straight—about 6—blue or partly white. Peas large, pods medium. A good, dwarf. prolific variety.

Bedman's Imperial—July 14—2½ to 3 ft.—slightly curved, roundish—6 to 7—large, blue. Valuable, prolific.

New Imperial—June 20—3½ feet—small, cylindrical—blue. Inferior to many.

McLean's Seedling—July 3—2 feet—large, nearly straight—very large, bluish. Excellent, prolific.

British Queen—July 23—5 feet—large, straight, nearly round—about 7—light green. Peas very large, good bearer.

Gros Vert Normand—July 20—6 feet—slightly curved, flattish,—7 to 8 —bluish. Sugary, excellent, very productive.

Fairbeard's Champion of England—June 30—5 feet—long, slightly curved—7 to 8—bluish. Sugary, very productive, excellent.

Successful Treatment of Young Trees.

As I promised to furnish you with an account of my management of fruit trees, I give you the following:

The soil on which I am forming my orchard, is gravelly, with some sand, and clay intermixed. A part is very fine gravel, and works easily; a part is coarser and stronger and will grow good corn. In the spring of 1848, I set out about one hundred trees, (mostly apple,) in the following manner: Large holes were dug, and a large farm wheel-barrow load of chip dirt, *well rotted*, put into each hole. The tree was then set by myself, carefully spreading out the roots with the hand, after having cut off the bruised parts with a sharp knife, and shortened back the top. A pail of water was dashed in as the earth was thrown in to settle it about the roots.

The ground was planted with potatoes before the trees came, (which were received late in the season;) the trees were carefully hoed during the summer, and now for the results:—All lived and grew finely but one cherry tree; many grew a foot the first season. In the fall, the ground received a heavy top-

dressing of manure, which was plowed under. The trees were earthed up, to prevent the mice from girdling them beneath the snow. In the spring of 1849, they were dug around for about 6 feet with a stout manure fork, the land plowed and sowed to onions, carrots, &c. The trees started vigorously, and grew till about the first of July, when the drouth was so severe that they ceased growing, the wood ripened well, scarcely making any second growth; the finest growth was about 15 inches on the average, some trees throwing out shoots 2 ft. in length. I intend to try some special manures upon them, and will give the results, if desired, at a future day, if life and health permit.

In the spring of 1849, I set about 140 trees, and although the season was severe for newly planted trees in consequence of the drouth, I lost but one, and that was a cherry tree. They were set in a similar manner to those in '48, except that a compost of rich earth and well rotted manure was used instead of chip-dirt, and the trees were mulched with straw and coarse manure. The average growth was 6 to 8 inches; the land was planted to potatoes and corn; where corn was planted, 3 or 4 rows of potatoes were planted next the trees.

A hard strong hail injured the trees in the early part of the season, bruising them severely. In the fall, those set in '49, were manured with a compost of leached ashes, muck, and well-rotted manure, with a small quantity of night soil, well mixed. About a bushel of this mixture was placed around each tree, which I intend to dig in this spring, as soon as the ground will do to work. The trees were all earthed up last fall, and I have not discovered any depredations of mice. The trees set are apple, pear and cherry. I am at a loss about pruning—but shall endeavor to form broad, spreading tops. If any one has had experience in the culture, pruning, &c. of young orchards, I should be glad to hear from such, through the columns of *The Cultivator*. J. Talcott. *Rome, Oneida Co., N. Y., April* 4.

Manure for Fruit Trees.

"What is the best manure for fruit trees, to spade or work in near the roots, of general application?" *G. C.*

The following has been found, after several years experience, to constitute one of the best manures for fruit trees generally. A mixture of peat or swamp muck, with one-half to one-quarter of its bulk of stable manure, and about one-twentieth of leached ashes. These ingredients should lie in a heap together for a few weeks, and then be worked over. If for peach trees, the soap-suds from the laundry thrown over the heap will improve it. If for cherry trees, which will not bear high manuring, the proportion of peat or muck should be larger, and with less of yard manure and ashes.

There are some other ingredients which may occasionally be added to advantage, as ground or dissolved bones, night soil, &c., where a strong manure is needed.

Profits of Fruit Culture.

S. B. Parsons, in his recent address before the New Haven Horticultural Society, states that within a few miles of his residence there is an orchard of about 20 acres, producing $2000 a year, the vegetables between the trees paying the cost of cultivation—that the vineyards of Dr. Underhill, on Croton Point, are said to yield a net profit of some $4000 per annum—that two cherry trees of his own yielded often, $30—and that the net profits of the great Newtown Pippin orchard of R. L. Pell, at Esopus, are some $8000 per annum.

Great Crop of Winter Squashes.

A neighbor of mine raised last year (1849) a very remarkable crop of winter squashes. The seeds were mostly of the hybrid squash produced by a cross between the Seven Year Pumpkin and Green Flesh Melon, and originated in my garden in 1844, as described in your May number, 1848, page 150. The soil was a sandy loam highly fertilized with barn-yard manure, and the dressings of limestone, made by the preparation of building stone. The extent of ground occupied by this crop was 36 square rods, being a plat 9 by 4. This area includes the whole spread of the vines. The number of the fruit was about nine hundred. The weight of which was usually from about twenty to eighty-four pounds, of which last weight there were some three or four. The estimated average was forty pounds. This gives eighteen tons as the average of the whole crop, or one thousand pounds to the square rod, which would give twenty-five fruits of average size to each square rod, or about one squash to each 11 square feet. The yield of this small plot will be seen to be equal to eighty tons to the acre. A crop of beets or carrots of the same weight would amount to sixteen hundred bushels, estimating the bushel to weigh fifty pounds. I saw the squashes after they were gathered, and have no reason to suppose the weight was over-estimated, as I am accustomed to sell large quantities of this vegetable, and always sell them by weight. This prodigious crop is to be credited, partly to the quality of the soil, and partly to a long hot and dry summer, the crop being saved from the extreme effects of drouth by subsoil water, at the depth of three or four feet. C. E. G. *Utica, March*, 1850.

Trees of California.

In Hartweg's recently published account of his botanical tour in California in 1846, we find many interesting descriptions of the vegetable productions of that region, some of which cannot fail to interest our readers.

The Californian Horse Chestnut, (*Pavia californica*,) which must be in the highest degree ornamental and showy, is thus described:—

"On the dry banks of the ravines, to the north-east of Monterey, the Californian horse chestnut is common. This extremely ornamental shrub or low tree rises to the height of twenty-five feet, is of a globular shape, and produces its fragrant whitish flowers of a delicate pink hue, in great abundance *on spikes twelve inches long;* one of these spikes, which I had the curiosity to count, had more than 400 open flowers and buds upon it."

On the mountains, about 4,000 feet above the level of the sea, he found the cones of the *Pinus macrocarpa*, or large-coned pine, measuring 15 inches in length, and growing on trees thirty or forty feet high. On the west flank of the great mountain range, the *Abies bracteata* was discovered, a remarkable fir, "which attains the height of fifty feet, *with a stem from twelve to fiftee feet in diameter*, one-third of which is clear of branches, and the remainder forming an elongated tapering pyramid, of which the upper part, for three feet is productive of cones."

The enormous growth of the forest trees in this region of the world, is strikingly exhibited in the *Taxodium sempervirens*, (known by the English names of Redwood and Bastard Cedar,) and in some

species of the pine. The Taxodium is thus described:—

"In close forests it grows to an enormous size, averaging 200 feet in height, with a stem of six to eight feet in diameter, which is as straight as an arrow, and clear of branches up to sixty or seventy feet. One tree, that is termed by the Americans "the giant of the forest," is 270 feet high, with a stem measuring fifty-five feet in circumference at six feet from the ground. The bark of the redwood is from six to twelve inches thick, reddish and smooth; the timber is of a beautiful red color, like pencil wood, fine, close grained, light, but brittle; it is well adapted for in and out door work, as the boards when seasoned, do not warp, nor is it attacked by insects. Large quantities of timber are annually exported to the Sandwich Islands; 1,000 feet of one inch boards, delivered on the beach at Santa Cruz, are worth 81."

Some of the gigantic pines were noticed in an attempted ascent of the snowcapped mountains in the early part of summer:—"Ascending the gradual acclivity, we left the region of the *Pinus Sabiana*, and entered that of *Pinus Benthamiana*, which seems to be the characteristic of the upper region. Some trees of this noble pine attain an enormous size. The largest I measured were 28 feet in circumference [9 ft. diam.] and 228 feet high. Of equal dimensions is *P. Lambertiana*, which however does not constitute masses by itself, but is thinly scattered among the former. The same is the case with a *Thuja* [arbor vitæ] which rises to the height of 130 feet, by 12 or 15 in circumference."

The rapidity of vegetation under that cloudless sky, may be judged by the fact that during an absence of ten days from Monterey, bulbous flowers had dropped their blossoms, and fully ripened their seed. This rapidity is not much less, even in spring. "By the end of April, the prairies in the Sacramento Valley assumed a different aspect; 2 weeks ago, they were a carpet of flowers, which have now disappeared, and a yellow, sickly tinge pervades the whole." "Most kinds had, during the fortnight since I first saw them in flower, ripened their seeds, and it was with difficulty I found a few grains of the beautiful little *Leptosiphon aureus*, and similar plants, which, between their taller neighbors, had almost become invisible."

Shipment of Fruit from Wayne County.

We make the following extract from Mr. PARDEE's Address before the Wayne County (N. Y.) Ag. Society:

We also learn what was to me an astonishing fact, that the offices in Wayne county, during the year 1848, cleared more dried fruit, by more than 30 per cent., than the entire state west of us, to and including Buffalo; and also, more by 15 pr cent. than the entire state east of us. The offices west cleared 538,000 lbs.—those east, 610,000 lbs.—while Lyons and Palmyra cleared 708,000 lbs., or more than 30,000 bushels.

This is indeed a noble tribute to the industry of the daughters of Wayne county; (for the women and children do the most of this work;) for who can calculate the enormous amount of labor, in drying 150,000 bushels of apples, peaches and plums—this being the requisite amount to make the 30,000 bushels when dried.

For several years past, the Palmyra office has cleared about 60,000 barrels of fine grafted apples per annum, or 150,000 bushels more of fruit; and if Lyons, Newark and Clyde together, send off as much more, (as they doubtless do from 50 to 100 per cent. more,) we then have the aggregate of 400,000 to 500,000 bushels of fruit, in a green and dried state, exported annually.

ROSE CUTTINGS.—One of the best methods of securing the success of these, is to stick the cutting about an inch deep into *clean* river sand—with properly prepared soil about an inch below to receive the roots as soon as they strike. The clean sand prevents the roots from rotting. A correspondent of the *Horticulturist* succeeded with this when every other mode failed—and says he does not lose one in twenty.

Hints to Young Men.

A Letter of Advice,

FROM AN OLD FARMER OF HERKIMER COUNTY, TO A YOUNG MAN NOW IN VIRGINIA.

As you lived with me, from a small boy to the time you was twenty-one, I claim the right to advise you.

You should bear in mind that you are young, without property, and without wealthy or influential relatives or friends to assist you; and that your future prospects in life, both as to character and wealth, must depend entirely on your own exertions. Do not be discouraged on this account; there is the more need of courage, perseverance and economy. There are many wealthy and influential farmers, particularly in western New-York and Ohio, who commenced with no more means than you have. They saved a few hundred dollars, went in while the country was new and land cheap, and grew into their present situation by their own industry and the improvement of the country. You can do the same. The new states and territories offer an equal chance, and perhaps better, owing to the increased facility of travel, and the transportation of produce to market. One could hardly find a place now to locate, where he would not, in all probability, be reached in a few years, by boats or cars propelled by steam. This was not formerly the case.

Whether you are to be in a situation to support a family comfortably, and to bring up and educate your children well, or to have a scanty and precarious support from day's work, is an important matter to you, and now is the time to think of it, and make the necessary preparations; much depends on the course you take for the first three or four years. If you are industrious and prudent, and lay up money during this time, your chance will be good—while if you are slack and spend what you earn, your prospects will be bad; your habits of thinking and acting during this time, will become so fixed that it will be hard to alter them. I speak of your family, because it is more than probable you will have one. "*Multiply and replenish,*" is a command of holy writ.

Your first object should be to establish for yourself a *good moral character;* without which you cannot expect to succeed well, and with it you can hardly fail of success. To effect this you should deal honorably and uprightly, keeping your word good on all occasions; be careful about making contracts and promises, but when made, fulfil them to the very letter.

Be thorough and persevering, in whatever business you undertake, and engage in none but what is fair and honorable.

Be careful and never do a *dishonorable or a mean* thing. Avoid law-suits; they are expensive, and

usually unprofitable, both in a pecuniary and moral point of view.

Avoid gambling by all means; it is bad in itself, and will lead to many other vices.

Be temperate in the use of intoxicating drinks; or what is much better, not use them at all.

Avoid loose, drinking, gambling company, whether they be rich or poor; whether they drink wine or whiskey. Habits acquired while young are hard to get rid of.

Treat every one with respect, and all decent persons will respect you.

Whenever you get a little money ahead, put it out in safe hands, on interest; better for the present to receive than to pay interest. If you have health, you can in a few years, lay up enongh to buy good land, in a new country, sufficient for a farm.

Better not enter into speculation; although some get rich by it, it is believed the majority fail. If a whole community should turn speculators, they would soon be in want of bread. Better to acquire wealth by the ordinary means of production.

Better not buy horses and carriages, until you have use for them, and can make them profitable.

The time to buy a thing, is when you really need it, cannot well do without it, can buy to good advantage, make it profitable, and have the money to spare to pay for it.

This you see, would exclude the purchase of pistols, bowie knives, watches, dogs, race-horses, &c. Young farmers in moderate circumstances, can get along without these things.

I advise you to take a public newspaper. One from the city of New-York is best. You can get one for a dollar a year, (say the *Evening Post* or *Tribune*, as best suits your political views.) The postage is a mere trifle; and the money paid in this way will be worth to you twice the amount paid out for *fiddling*. Remember this; in our country, the man who does not read the papers is behind the times. They give a history of matters and things in general, as they daily transpire, and their reading keeps one up with the times. As you are farming, you had better take *The Cultivator*. Better to spend your leisure time reading than at *cards*.

I am told you have taken, (in company with a partner,) a large farm and dairy on shares; if so, manage it thoroughly and with care and prudence. This will be both to your profit and credit. You, doubtless, have a written contract. Fulfil it in every respect; keep an exact and minute account between the land owner and yourself. This will save trouble in making settlement, and will help to establish your character as a correct business man; while if your acoounts are loose and incorrect, you will have trouble in making settlement, and it will operate much to your disadvantage. A good character as a business man, once established, is easily sustained, while it is hard to recover from a bad one.

Remember that your only capital consists in your ability to labor, and in the improvemeut of your mind so as to turn your labor to good advantage; and that an honest, intelligent laboring man ought to be respected in any society, and is respected by all fair-minded men.

Nature has so ordered it, that but "*few men can be really great*," while every common-sense man can be honest, intelligent and industrious. I hope you will at least come up to this standard.

In short, make up your mind to "*do to others as you would wish them to do to you*," and you will succeed. This is the essence of morality, and the best rule of politeness; adopt this rule, be industrious, *go a-head*, and all will be well with you.

Facts and Opinions.

(*Condensed from Books and Papers.*)

Raising Potatoes Cheaply.—The *Michigan Farmer* says that A. Z. Moore raises potatoes at small cost, as follows:—In planting, which is done while the plowing is progressing, the potatoes are dropped into every third furrow, the fourth furrow covering them. When up, the whole surface is harrowed, killing weeds and not hurting potatoes. A plow throws out the potatoes in harvesting, and a fork removes all omitted by the plow.

Steaming Chopped Food.—An English farmer, who keeps 90 head of cattle and horses, estimates that he saved thirty tons of hay in one year, by chopping and steaming a mixture of equal parts of hay and straw, and saving $270 worth of hay. The cost of the cutting and steaming was less than $20.

Bees in Winter.—The *New-England Farmer* recommends the shading of bee-hives in winter, to prevent the bees becoming warmed into activity, and leaving the hive to be chilled to death on the snow—and also states that he has found by weighing that bees consume honey much faster in the dry part of summer, when the flowers afford no honey, than in winter; that hives, kept uniformly cool in cellars, have scarcely lessened in honey through winter; and that the greatest losses have occurred where bee-sheds have faced the south, exposed alternately to hot sun, cold winds, and sharp nights.

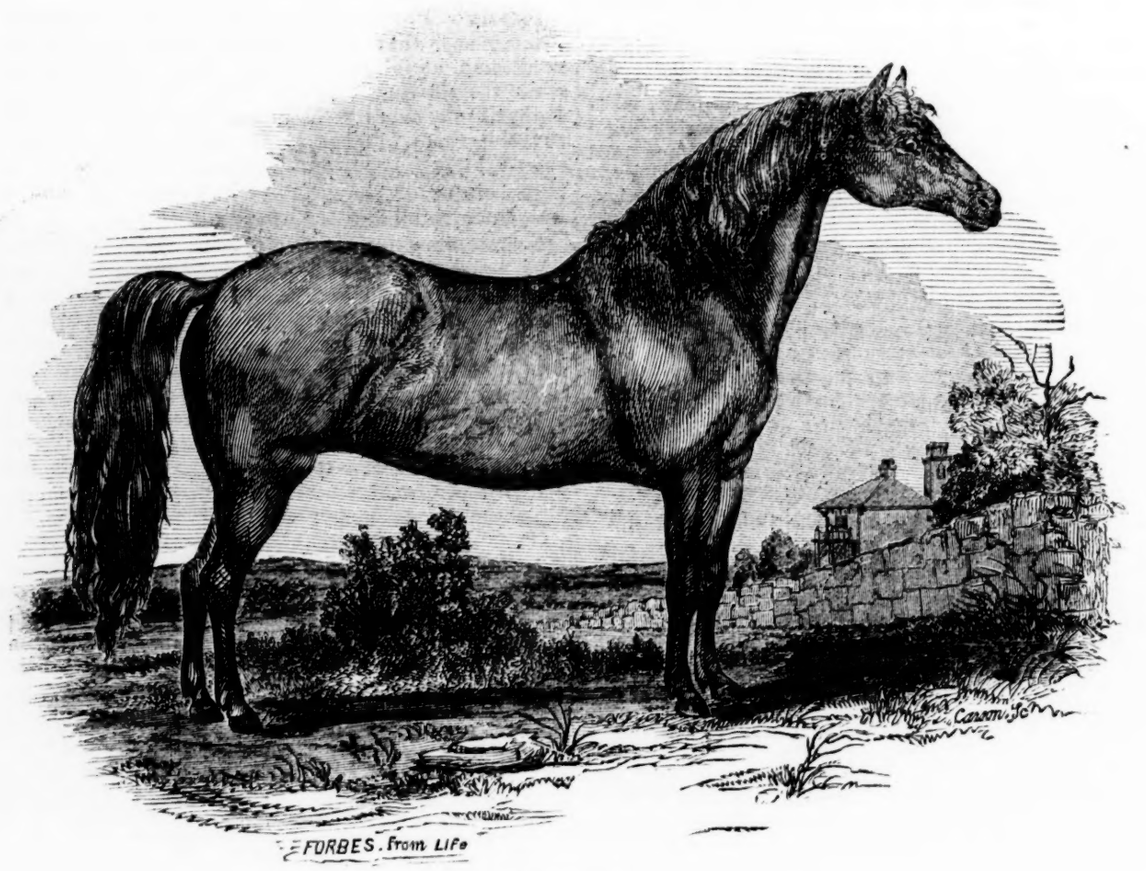
Loss of Heat.—By experiments made some years ago in Philadelphia, the following proportions of heat were radiated or thrown out into the room:

Sheet iron stove with 42 ft. pipe, radiated					100	parts of heat.	
do	do	13	"	"	95	"	"
do	do	5	"	"	67	"	"
Cast 10 plate stove,		5	"	"	45	"	"
Open Franklin stove,		5	"	"	37	"	"
Open coal grate,				"	18	"	"
Common fire place,			"	"	10	"	"

Close, and Liberal Feeding.—A. Todd of Smithfield, R. I., states in the *N. E. Farmer*, that he had five cows pastured on a piece of land, but not feeling satisfied with the amount of feed they obtained, he sold one at the end of the year. He consequently found that the four yielded a greater *nett profit* than the five had done. "Concluding in my mind," says he, "that if four cows were more profitable than five, on the same principle *three* might be still better, (although I find no rule in "Adams" or "Smith" that supports this doctrine,) I accordingly disposed of another, and by taking a little extra pains with the *three* left, I churned *more butter* from the three than I had in any preceding year from the four or five."

Second-Growth Forests.—The same paper gives the experiment of John M. Weeks of Vt., who carefully excludes cattle from his woods, and allows the second growth to spring up freely where his fire wood has been. In a few years, the best and most thrifty of the young trees are trimmed up six feet, leaving about 800 or 1000 trees per acre. The value and beauty of the eight acres thus covered with young growth, from one to seventeen years old, exhibits very strikingly the value of this trimming out. Two acres of this piece are young pines only six years old, and so vigorous and heavy is their growth, that he thinks there is more timber on the land than ever before, setting aside some of the largest pines. He intends to cut out soon about half of these young pines, leaving about 400 to the acre.

Coarse Wool.—The *Wool-Grower* says that the present high price of coarse and medium wool, "is bringing in a large amount of foreign, and we should not be surprised if the importations this year should exceed at least twenty millions."



LADY GIFFORD.

Stock Husbandry.

Lady Gifford.

The above figure is an excellent portrait of a mare, noticed in our last, as having been purchased by Mr. S. A. GILBERT, East Hamilton, N. Y., of Mr. INGRAHAM, Chester, Vt. We are informed that she was bred by MADISON ALDREDGE, of Weathersfield, Vt., was by the well-known horse Gifford Morgan, dam a bay mare owned by Mr. Aldredge. Her color is a dark chestnut, or brown. She has great depth and capacity of chest, and remarkable muscular development, combined with justness of proportion, which gives her great bottom and power. She has not yet been trained, but her natural action is of the right kind, and indicates that mature age and proper management only, are wanting to enable her show speed equal to the best. She has great spirit and fire, but withal so much intelligence and gentleness that a lady or child can safely drive her.

Alderney breed of Cattle.

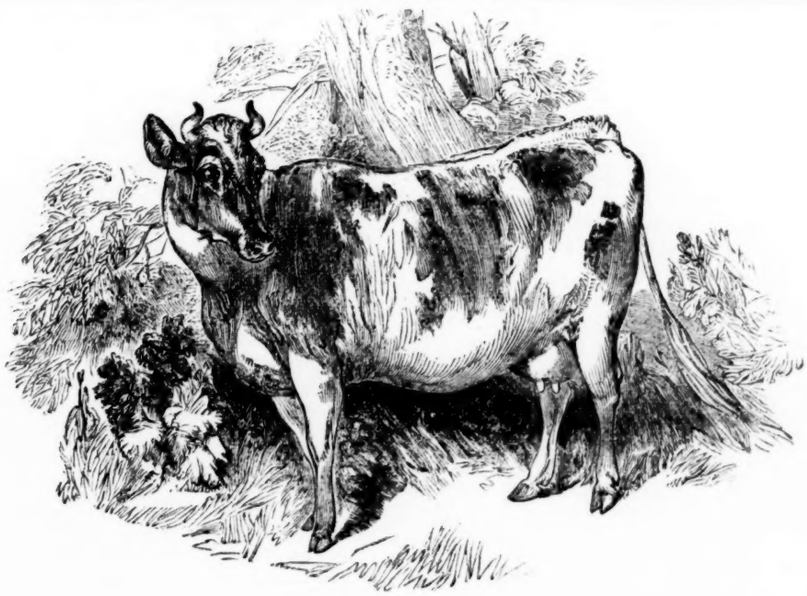
In the islands of Jersey, Guernsey, and Alderney, in the English Channel, a breed of cattle has long existed, the cows of which have been much celebrated for the richness of their milk. This breed is said to have come originally from Normandy, France, where cattle of similar characters are still found. In the islands above mentioned, however, the breed has been of late years much improved, so that it is considered superior to the Norman stock. The improvement alluded to, has been produced chiefly by an association of farmers in Jersey. An account of the improvement effected by this society, has been given by Col. LECOUTEUR, in the fifth volume of the Transactions of the Royal Agricultural Society. He states that these cattle were formerly ill-shaped, of poor constitutions, and great consumers in proportion to their weight. The farmers had looked only to the production of rich milk and butter, and the consequence was, that, though the cows gave good returns in this respect, they were less profitable than they might have been, had they possessed other valuable qualities, the union of which would not have detracted from their dairy produce. But these defects, we are told, have been in a great degree remedied. Col. LeC. observes—"By having studied the habits of a good cow with a little more tendency to fatten than others, and crossing her with a fleshy well-conditioned bull of a stock that was also known to produce quantity and quality of butter, the next generation has proved of a rounder form, with a tendency to make fat, without having lost the butyraceous nature."

For determining the comparative excellence of animals, the society have a "scale of points" for bulls and another for cows, as follows:—

Scale of Points for Bulls. P'ts.

Art. I. Purity of breed on male and female sides, reputed for having produced rich and yellow butter,..... 4

II. Head fine and tapering, cheek small, muzzle fine and encircled with white, nostrils high and open, horns polished, crum-



ALDERNEY COW.

pled, not too thick at the base, and tapering, tipped with black; ears small, of of an orange color within, eye full and lively,..... 8

III. Neck fine and lightly placed on the shoulders; chest broad, barrel hooped and deep, well ribbed home to the hips,.... 3

IV. Back straight from the withers to the setting on of the tail, at right angles to the tail. Tail fine, hanging two inches below the hock,..... 3

V. Hide thin and moveable, mellow, well covered with soft and fine hair,..... 3

VI. Fore-arm large and powerful, legs short and straight, swelling and full above the knee, and fine below it, ... 2

VII. Hind quarters from the huckle to the point of the rump, long and well filled up; the legs not to cross behind in walking,.... 2

VIII. Growth,..... 1

IX. General appearance,..... 2

Perfection,..... 28

No prize shall be awarded to a bull having less than 20 points.

Scale of Points for Cows and Heifers. P'ts.

Art. I. Breed, on male and female sides, reputed for producing rich and yellow butter,.. 4

II. Head small, fine and tapering; eye full and lively. Muzzle fine and encircled with white; horns polished and a little crumpled, tipped with black; ears small, of an orange color within,..... 8

III. Back straight from the withers to the setting on of the tail; chest deep, and nearly on a line with the belly,..... 4

IV. Hide thin, moveable, but not too loose, well covered with fine soft hair,..... 2

V. Barrel hooped and deep, well ribbed home, having but little space between the ribs and hips; tail fine, hanging two inches below the hock,..... 4

VI. Fore legs straight and fine, thighs full and long, close together when viewed from behind; hind legs short, and bones rather fine; hoof small; hind legs not to cross in walking,..... 2

VII. Udder full, well up behind; teats large and squarely placed, being wide apart; milk veins large and swelling,..... 4

VIII. Growth,..... 1

IX. General appearance,..... 2

Perfection for cows,..... 30

Two points shall be deducted from the number required for perfection on heifers, as their udder and milk veins cannot be fully developed. A heifer will therefore be considered perfect at 28 points.

No prize shall be awarded to cows or heifers having less than 21 points.

Some of the improved variety of this breed, are said to possess nearly every good point in the scale, and they are, at the same time, fully equal to the old stock for the dairy—some giving fourteen pounds of butter in a week, and ten pounds being common through the spring and summer months.

We commend the above rules to the attention of our dairymen. With the exception of one point, a "thin skin," we approve them. For our severe climate, a skin of considerable substance is indispensable, though it should be mellow, and as the rule says, "well covered with soft hair."

Alderney cows have at various times been imported into this country; but we have not heard of the introduction of any of the improved variety described by Col. Le Couteur. They are doubtless much superior to the old stock in form and constitution. The old breed has not, generally, sufficient hardiness for the climate of the northern section of our country.

Pedigrees of Short-Horns.

Eds. Cultivator—In the January No. of *The Cultivator* for 1850, is a letter from Mr. Chapman, giving a part of Mr. Bates' letter to the publisher of the print of his bull, Duke of Northumberland, in which Mr. Bates says he has the whole of the Duchess family in his possession, and that they are superior to all other tribes of Short-horns.

Now I propose examining the pedigree of this bull, Duke of Northumberland, to see how much Duchess blood he has. For this purpose, I copy his pedigree from the Herd-book:

"DUKE OF NORTHUMBERLAND (1940,) roan, calved Oct. 15, 1835, bred by and the property of Mr. T. Bates; got by Belvidere (1706,) d. Duchess 34th by Belvidere (1706,) gr. d. Duchess 29th by Second Hubback (1423,) gr. gr. d. Duchess 20th by the 2d Earl (1511) gr. gr gr. d. Duchess 8th, by Marske (418,) gr. gr. gr. gr. d. Duchess 2d by Ketton 1st, gr. gr. gr. gr. gr. d. Duchess 1st, bred by C. Colling by Comet (155,) gr. gr. gr. gr. gr. gr. d. by Favorite (252,) gr. gr. gr. gr. gr. gr. gr. d. by Daisy Bull (186,) gr. gr. gr. gr. gr. gr. gr. gr. d. by Favorite (252,) gr. gr. gr. gr. gr. gr. gr. gr. d. by Hubback, (319,) gr. gr. gr. gr. gr. gr. gr. gr. gr. d. bought by C. Colling from Stanwix, by James Brown's Red Bull, (97.)"

Now we will count the cow bought from Stanwix as "*pure Duchess;*" when she had a calf by Hubback, the produce was half; the first produce of Favorite was a quarter; the produce by Daisy bull was an eighth; the second produce by Favorite was a sixteenth; the produce by Comet was one thirty-second part; the produce of Marske (418) is one sixty-fourth part; the first produce of Belvidere, Duchess 34th, is one one hundred and twenty-eighth part; and the second produce of Belvidere is one two hundred and fifty-sixth part. *That is, the Duke of Northumberland had but one part Duchess blood, while he had two hundred and fifty-five parts of other blood.*

In this estimate I did not count some fractions, but they would have given him even less Duchess blood than the estimate above, had they all been counted. Now if Duke of Northumberland weighed two thousand and forty pounds, he had but eight pounds of "Duchess tribe" in him. But I suppose this is enough to brag on.

I heartily concur with Mr. Chapman in the hope that some of our enterprising breeders will import some of the best of Mr. Bates' herd; but as to the "*pure, unalloyed Duchess tribe,*" there is no such thing in existence. But I do not consider Mr. Bates' stock any the less valuable on that account. The Oxford premium cow owed her excellence to the union of several tribes; particularly to the Princess, Daisy and Duchess tribes. None of the tribes have been, nor can they be kept "*pure and unalloyed*" for any length of time, without endangering their *health, thrift and productiveness.* Mr. Bates' stock, if equal to their reputation, would be a great acquisition to the breeders of Short-horns in America, particularly in those localities where the breeder was near market. But a circumstance mentioned in his letter to the publisher of the print of the Duke of Northumberland, is indicative of great tenderness, or bad travelling, perhaps both. In that letter he says, Duke of Northumberland, in traveling twenty-six days, lost 392 pounds, or more than fifteen pounds a day. I suppose he was driven moderately, with great care. If his stock should inherit this quality, they would be in a sad plight, when driven to market from Kentucky to New-York! However, I should like to have some of them; I would risk their travelling to nearer markets.

Mr. Bates has been very particular in using the best blood, and in that way, has kept up the excellence and reputation of his stock. For this he has been largely indebted to the Daisy tribe, which I have not seen mentioned either in his or any other publication, and have been at a loss to account for the omission. His first Duchess cow, purchased in 1804, was by Daisy Bull (186,) and all his Duchess tribe are descended from her. So he began with half Daisy blood. That the Daisy tribe were equal in England in 1810, in the estimation of purchasers, is evident in the fact that at Mr. Charles Collings' great sale, a cow of that tribe (Lilly) sold for four hundred and ten guineas—ten guineas more than any cow of any other tribe. And that they still kept up their reputation in 1831, is proved by a certificate of George Coats, keeper of the English Herd-book. After giving the pedigree of Bertram (1716,) a bull of the Daisy tribe, (brought to America by Col. Powel, and brought to Kentucky by David Sutton,) he says:—"This bull combines more perfection in form, handling, and dairy qualities, than any bull I ever saw. I consider him very much superior to old Comet, bred in my neighborhood, and sold by public auction for one thousand guineas."

Mr. Stevens, in the August number of *The Cultivator*, says that 3d Duke of Cambridge—"is the only bull in America got by Mr. Bates' '*crack prize*' bull, Duke of Northumberland." Now Locomotive (4242,) was not only got by Mr. Bates' "*crack prize*" bull Duke of Northumberland, but his dam was Mr. Bates' "*crack prize*" cow Oxford. Locomotive was brought to Kentucky by Mr. Letton.

Whilst I am writing, I will notice an error of Mr. Stevens, published in the American Herd-Book, p. 68. He says, in regard to Mr. Bates' stock,—"Up to the introduction of Belvidere to his herd, he had adhered to his Duchess blood entirely, (except in the case of two or three cows put to Marske,) and produced a disposition to sterility. * * * * Since 1831, Mr. Bates has used that blood, a union of the Duchess and Princess tribes, mainly, and has only resorted to any other in one instance, viz: Cleveland Lad."

Mr. Bates has used other blood in many instances; a few of which I will notice. Look at 3d vol. English Herd-Book, page 355, you will see that the Duke of Cleveland was calved in 1831, bred by T. Bates, and got by Bertram (1716,) a bull of the Daisy tribe. In 1833, Duchess 35th was calved (p. 354,) by Gambier (2046;) Gambier was by Bertram (1716,) his dam of Mr. Charge's stock. In 1835, Duchess 38th was calved, got by Norfolk (2377,) a bull of Mr. Whitaker's breeding (p. 356.) In 1833, the Matchem cow had a cow calf by Gambier, and in 1834, a cow calf OXFORD by Duke of Cleveland (1937;) both these bulls were by Bertram (1716,) (p. 494.) I deem it unnecessary to multiply cases, as these are sufficient.

I think Mr. Stevens is also mistaken in saying—"the pedigree of the Princess tribe of Short-horns, traces farther back than any one recorded in the Herd-Book;" but presume the reasoning by which I come to this conclusion would be uninteresting. Mr. Bates says in his letter to Mr. Vail, (published in the *Agriculturist* 1848, p. 125,)—"No animals of the Princess tribe can now be had in England, *worth sending* to America, except what I have, descended from the Matchem cow, the dam of your Wellington; and that tribe was only preserved by putting the Matchem cow to bulls of my Duchess family." * * * "I have been thus particular to let you know how highly I prize this tribe, the *only one* left of any value from the Princess tribe of cows."

Thus it appears that according to Mr. Bates' opinion, *he* had all the Duchess tribe, and all the Princess tribe, that was worth anything. Notwithstanding Mr. Bates' opinion, given above, I have no doubt the cattle imported by Mr. Stevens, of the Princess tribe of Short-horns, *are really fine.* S. D. MARTIN. (*Near*) *Colbyville, Ky., March*, 1850.

TIME FOR HEIFERS CALVING.—A late English writer considers it a matter of great importance, that heifers should be so managed as to have their first calf late in spring, when there is an abundance of succulent food, inducing a large supply of milk. This is much better than to have them come in early in spring, when they have dry food only. The habit at first formed is apt to remain with them, and if they commence by giving a good supply of milk, they are apt to be good milkers afterwards.

The Farmer's Note-Book.

Culture of Indian Corn.

Eds. Cultivator—Although not engaged, at present, in agriculture, I am not an indifferent spectator of its progress, and have witnessed with pleasure the success of several quite different modes of cultivating Indian corn. As the season for planting is now close at hand, I will call the attention of your readers to a point in the cultivation of that crop, which if known, is not duly appreciated, and therefore much neglected. I mean *the early culture of the plant.*

All intelligent farmers know that a deep, rich, dry and warm soil is the most suitable for corn, (and by deep plowing and manuring, most soils may be made so,) but they are not so unanimous in the belief of the benefit of deep plowing for corn, because good crops are *occasionally* grown on rich soils, and in favorable seasons, with shallow plowing. The value of barn-yard manure to corn, may be inferred from the fact that even on some of the fertile lands of the west, already too rich for other cereal crops, the corn crop is benefitted by it, and it is the only grain crop to which it can be applied there with profit. Deep plowing of a rich soil, is then the first step in corn culture, as it best secures the crop against injury from parching drouth, as well as excessive rains, and furnishes a wider range for the roots to seek their nourishment. The soil should be well pulverised by the harrow, and marked out carefully for planting into drills about 3 inches deep, unless the surface is very level, and liable to be flooded by rains. Plenty of seed should be used, so as to ensure at least two, but never more than three thrifty plants in each hill.

The spaces between the rows must vary with the kind of corn planted. The speedy germination of the seed, and the rapid and vigorous development of the young plant, exert an important influence on it, during the whole period of its subsequent growth to maturity; therefore, to hasten germination, the seed may be steeped over night in some fertilizing liquid, and rolled in gypsum or guano; or a little well rotted manure or compost may be put into the hill with the seed; and as seeds germinate most readily in fresh plowed ground, it is desirable that the plowing and other preparation of the ground, and the planting, should be done with as much despatch as is consistent with having it *done well.*

The seed should *not be steeped* unless it is to be planted in *fresh plowed or moist soil.* The best time for planting in this neighborhood is from the 10th to the 20th of May. If the plowing and other preparation of the ground has been well done, and the corn is planted, it may be said truly of the cultivation, that—"Well begun, is half done."

As soon as the young plant is well up, start the cultivator, and run it as near the rows as possible; or if the plowing has not been thoroughly done, a small plow may be used for this first dressing, turning the earth away from the plants. Then with potato hooks or similar implements, stir the soil around and between the plants, which will destroy a whole generation of weeds in embryo; now drop a spoonfull of gypsum on every hill. This first early dressing promotes the growth of the young plants, and gives them the start of the succeeding crop of weeds; and while your neighbor is "waiting," as he says, "for his corn to get big enough to hoe," yours will call loudly for a second dressing. *His* will be sickly, pale and spindling, in consequence of its struggle with the grass and weeds, which have nearly supplanted it; while the large stem, the broad leaf, and the deep green color of yours, will indicate its healthy and vigorous growth. With double the labor, he cannot now half destroy the weeds; and by the time "his corn," as he says, "is big enough for hilling," you may with less labor have given yours three and even four dressings with the cultivator and hoe—during which time its growth has been rapid, and it will be "setting for ears." Keep the surface nearly level, and "earth up" slightly round the plants. The more the earth is stirred the better, especially during dry weather, and the cultivation should be continued till it "sets for ears," when it will so cover the ground as to arrest the further growth of weeds. And now some gypsum should be sown over it broadcast, and the labor of cultivation is ended.

The following advantages result from this mode of cultivation. It increases the quantity and quality of the corn; it leaves the land clean, and prepares it for wheat or any other succeeding crop, or grass, as well, if not better, than a naked fallow; it hastens the maturity of the corn so that it may be cut up the last of August or first of September, in season for sowing wheat; it may be husked and the stalks housed before the autumnal rains set in, and finally, (best of all) it is the most profitable.

Seed-corn should be gathered in the field before the main crop is harvested. The largest of twin ears, and those of earliest maturity should be selected. Instead of deteriorating, corn may be much improved by this method.

I omitted to state in its proper place, that at the second dressing the plants should be thinned out to three in a hill. A. D. G. *Troy, N. Y., April.*

"A Little Land Well Tilled."

Eds. Cultivator—Farmers are very liable to err in cultivating too much land. They make their calculations to sow and plant so many acres, without taking into account the quantity of manure they have to apply, or the amount of labor they can bestow. This not only subjects them to much haste and inconvenience, but their crops are not cultivated as they otherwise would be, and the land is not left in so good condition when it is laid down to grass. There is still greater folly on the part of some, in the desire to increase their estates by the purchase of more land, when their system of *half cultivation* should admonish them that they had better sell than buy.

"What is worth doing is worth doing well." This should be the motto of farmers in the performance of all their work. A small farm well cultivated, is better than a large one half cultivated. Any one that has a good kitchen garden can see how profitable land may be that is manured and cultivated thoroughly. Pursue the same course in all land cultivated, and the profit would be in proportion. The majority of farmers do not know experimentally what an acre can be made to produce. Mechanics in our villages, and those that own but little land, generally manage to make that very productive. An illustration of what may be done on a small piece of land, came under my observation last fall, during a sojourn of a few days with a friend, in one of our manufacturing villages. About three years since, he purchased a piece of land for a house lot, its area not exceeding half an acre. After building, he laid out his ground, and planted some peach trees, two or three kinds of cherry and plum trees, some dwarf pear trees, a few choice apple trees, grape and strawberry vines, and currant and white

raspberry bushes. On the remainder, besides having borders for plants and flowers, (by the way, I thought his *household flowers* the most interesting,) he raises all the vegetables necessary for family consumption. Some of the trees have already commenced bearing; he has a supply of strawberries, currants and raspberries in their season, and in a few years, will probably have a plenty of fruit, much better than can be obtained in market, because nicer and fresher, and the cost of it will be merely nominal. The most of the labor of planting and cultivating this ground has been done in spare moments, redeemed from the engrossing cares of manufacturing.

This shows what can be done with small means, even when the cares of business leave but little leisure. Examples of this kind are becoming more numerous, as there is an increasing interest manifested in rural pursuits. Thorough cultivation is becoming better understood and appreciated, and the example of good cultivators has a great influence over the careless and negligent. W. L. EATON. *Weare, N. H.*

How to Prevent the untimely Sitting of Hens.

EDS. CULTIVATOR—It is the sentiment of some benevolent persons, that hens should always be permitted to sit when they are disposed to do so. If they were in a state of nature, this would undoubtedly be a safe rule, as they would then hatch one, and perhaps at most two broods. But the hen, when domesticated, and fed artificially, becomes a factitious being, and is no longer governed by natural instinct merely, as in her wild state. Every one familiar with the breeding of fowls, well knows that they will sit, if permitted, in almost every month of the year. Fancy breeders may have the time and patience to take care of a brood of young chickens in January; but the farmer, who must have a constant eye to profit, cannot. Chickens, in central New-York, should never be hatched later than the first of September. I once had a brood of sixteen chickens, hatched the middle of September, many of which died of a cold chill on the 2d of December, although they were treated with ordinary care.

The ordinary notion, that late chickens lay earlier than early chickens, is, I half think, true. It seems at first sight, physiologically improbable. Possibly the reason may be, that they do not become so fat as earlier chickens.

It becomes a question of interest then to every farmer, how he can most cheaply and readily prevent the sitting of hens at untimely seasons. The following suggestions, which I saw substantially in some book, many years since, will bear repetition. I have myself practiced them for five or six years, and know their value. The treatment consists in putting the hen wishing to sit, in close quarters, where she has light, food and water, but no straw, and where she can see her associates. Three or four days confinement here will be sufficient. She may then be liberated, and will soon begin to lay again.

I use for this purpose, a sort of lattice, made by nailing two or three dozen ordinary house laths across two or three poles or strips of board eight feet long. This is set leaning against the side of the barn, in some roomy place, with the ends stopped up. This is cheaper and more effectual than any other. To dip a hen into cold water, at a time when nature has thrown her into a fever, is often injurious to her health; and to tie a red or white rag to dangle behind her, thus making her alternately the terror and laughing stock of the whole barnyard, is not generous. A. M.

Live-Stock Insurance.

The "American Live-Stock Insurance Company," incorporated by the Legislature of the state of Indiana, publish the following classes of hazards and rates of annual premiums:

Rates for Horses.—1st. Horses employed for agricultural purposes, under $125 per head in value,	3 pr cent.
2d. Over $1.25 and under $200,	3½ "
3d. Hackney, gig and carriage horses, under $200 pr head in value, for country,	3½ "
do do for city,	5 "
4th. Dray horses, for general use, under $200 per head in value,	5 "
5th. Horses, $200 per head and upwards in value, for country,	5 "
" " " in city,	5½ "
6th. Stallions, of under $200 in value,	6 "
If $200, and under $375 in value,	6½ "
If $375, and under $1000,	7 "
Sheep.—Of every description, if above 3 months old,	5 "
Rates for Cattle.—1st. Cattle, under $50 per head in value,	2½ "
If worth $75, and under $125,	3 "

Prize Bulls and Cattle of extraordinary Breed—At rates proportionate to their value, from 3½ to 5 per cent.

Cows kept in large towns are not insurable.

Stock under 12 months old, not insurable, except at extra rates, viz:

For 6 months insurance, 2-3 the rate.
3 " " 1-3 "

Risks of *Pleuro Pneumonia, Glanders*, and other fatal and *contagious diseases*, 1 per cent. in addition to the above rates.

For further particulars, see advertisement.

Farming in Aroostook.

EDS. CULTIVATOR—I have been engaged in farming in this county for about ten years past, and have during that time taken several agricultural papers, and think they have more than ten times paid me the cost of them in the increased productions of my farm. I have raised during the past season nearly four hundred bushels of excellent Christie potatoes, that have cost me only five cents per bushel. I have also raised at the rate of upwards of eighty bushels of corn to the acre, on one acre and one hundred and eight square rods of land, and the crop gave me, clear of all expenses, *one hundred and eight dollars*. My success in raising these crops, I attribute entirely to the information derived from reading agricultural papers. PARKER P. BURLEY. *Linneus, Aroostook Co., Me., March* 25, 1850.

Improvement in Connecticut.

A correspondent of the *Agriculturist*, who dates at Farmington, Ct., gives a favorable account of the improvements in farming in that neighborhood. In regard to the production of grass and the quality of the cattle, we can from personal observation testify to the correctness of his statements. The writer observes that there is a large proportion of land in Farmington which has formerly been considered exhausted, and has been sold as low as $3 an acre within the last twenty years; but which is now worth, to cultivate, from $40 to $50 per acre, and is still improving. He says—"Our grass lands lying in the vicinity of our main street, produce on the average four tons to the acre, both crops, (we always cut two crops, per year;) one field that was actually weighed, produced over five tons to the acre, and there are others which will equal that. There were three acres of oats, averaged 86 bushels per acre, one acre of which being limed produced 92 bushels; of corn there have been several pieces measured, some of the results I will state. One single acre produced 136 bushels; one piece of three

acres produced 116¾ bushels per acre, weighing 60 lbs. per bushel. Another piece of six acres, one acre of which was measured, produced 102 bushels, a fair average of the whole. In the same field there were three acres of potatoes, which produced something over 600 bushels sound tubers. There were other fields in corn which were estimated to produce more than the last named, but not measured. We have the pride also to believe that we rear as good horned cattle as any of our sister states. Our matched cattle sell at from three to four years of age, for 125 to 150 dollars per yoke; we can show cows from whose milk at grass alone, 2 lbs. butter per day are made; and from a town in our vicinity which is considered as one of the poorest in our state, of only a population of 633, was exhibited at a late neighborhood cattle show, a team of nearly 80 yoke, many of which were worth $100 per yoke."

Raising Pumpkins.

Eds. Cultivator—Last season, Mr. Alvah D. Grenell raised large quantities of pumpkins and good corn, notwithstanding the unfavorable season. He says he always succeeds by pursuing the following course. In the fall he scrapes up the leaves and black soil in the woods, into broad winrows, about the width of a wagon or cart, and then drives over them with a load of lime, scattering it as they go. In closing up this winrow, and loading it, the lime becomes intimately mixed in, and the whole is deposited in heaps in the field, where it lies till the ground is plowed in the spring. This he thinks makes *new ground* of it, and pumpkins delight in new ground.

I was mentioning this mode of raising pumpkins to Mr. Sam. Strong. I remarked, there were scarcely any pumpkins. "Why," said he, "I have lots of them." How do you manage? "Why I did'nt do any thing;—I only drew a lot of dry leaves for my hogs to nest in, and when they got wet and worn up, put in more; and then in the spring, manured my ground with this substance." So his experiment makes good Mr. Grenell's supposition, that the leaves contain the substances proper for the growth of the pumpkin. H. V. O.

Turning Stock to Grass.

In many instances, sheep may be turned to pasture, almost as soon as the snow is gone. If there is grass of the previous year's growth, the sheep will derive more benefit from eating it, provided the ground is not too wet, and the pasturage for the present season, will be rather improved by its being cleared off. The sheep should, however, be regularly provided with what hay they want, otherwise they may fail to obtain a proper support. Portable racks or feeding boxes may be placed in some sheltered part of the pasture, and the hay supplied morning and evening, until the grass is sufficiently grown to render it no longer necessary. Care should be taken to shelter them from storms, especially while they are having lambs and while the lambs are young, and also immediately after shearing.

It is not expedient to turn cattle and horses to grass as early as sheep may generally be turned out; chiefly for the reason that the larger animals are liable to do injury by poaching the soil, and breaking and destroying the sward. On this account, it is proper to keep them in winter quarters till the ground is well settled and the grass is well started. It is advisable, in order to check the too laxative effect of succulent herbage, to allow the animals more or less hay, according to their appetites, for a week or more after they are put to grass. Milch cows are generally brought to the barn for some time after they are first turned out, and they should be closely watched, lest they become weakened by the sudden change to green food. The best of hay, and what salt they will voluntarily eat, should be allowed them while in their stalls or yards.

If the farmer is properly supplied with hay, it is best to feed working oxen at the barn till the spring work is performed. They will be stronger, and will endure labor better, fed on hay, than on grass; and there is much convenience and saving of time in having them at the barn door whenever wanted. Horses which are kept daily at work, should be fed at the stable at all times. Grass alone, is not sufficiently substantial or nutritive to impart the requisite strength to an animal whose muscles are constantly and powerfully exercised. Hence it is necessary to add grain, in certain proportions, according to the amount of labor performed. When the animal is fed in the stable, the food can be readily regulated, mixed, and apportioned, as circumstances render proper.

Culture of Carrots.

Eds. Cultivator—I should like to be permitted through the medium of your valuable paper, to say a few words to dairymen and others in relation to raising carrots and other roots for the purpose of feeding their stock. Will you give your readers your opinion as to the best time of sowing the seed, and mode of cultivating the crop? I think you will agree with me in saying that it only wants a thorough knowledge of the manner of raising carrots, and their profitableness to feed all kinds of stock, to make them a common as well as a very valuable crop to the farmer. A few of my neighbors have been trying them a year or two, and have come to conclusion that the root culture is almost indispensable with good farming. They say they can (with plenty of carrots) make as much butter and cheese from the first of March, or from the time cows come in, to the first of June, as they can in the same time in summer, on the best of feed. Dairymen think of this, and try it; you will find carrots as good for feeding horses and young stock, as they are for cows. The tops are preferable to hay, to feed in fall. Subscriber. *Salisbury, April 16th*, 1850.

Carrots should be sown on warm and friable soil. They may be sown at any time after the ground is sufficiently warm to insure the germination of the seed, till the tenth of June. The ground should be in good condition as to richness, and well pulverised. The seed may be sown with a machine in drills, eighteen inches apart, the plants being thinned to three inches apart. The crop should be kept clean of weeds. (See back volumes Cultivator.) Eds.

Mode of Cultivating Corn.

Eds. Cultivator—I have thought that the following mode of raising corn, as practiced by Mr. Clark, of Castleton, Vt., and others, might be of profit to some of the readers of *The Cultivator* at this season of the year, and they be led to try the experiment, and perhaps by doing so double their crop; for I doubt not there are many who do not raise over forty bushels per acre.

In the year 1847, Mr. C., from one acre, raised 117¼ bushels, by weight, (according to the standard of that State.) In 1848, 110 bushels, for which he received the premium from the Rutland County Ag

ricultural Society. Last year, from 2½ acres, he raised 275 bushels, but made no application for premium.

Green sward is invariably used, being plowed in the spring and turned over, so that the edge of one furrow will rest upon the other, after the manner of shingling. The manure being spread upon the furrows, and thoroughly harrowed, it is marked, the rows three and a-half feet apart, running north and south. A compost is made for each acre, of 10 bushels unleached ashes, 3 bushels of manure from the hen roost, and 2 bushels of plaster—the whole well mixed together, dry. (The hen manure will have to be beat or thrashed fine before mixing.) One handful is sufficient for two hills. A boy will drop it as fast as two men will plant. The seed, before planting, is soaked six hours in a solution made by dissolving chloride of lime in water sufficient to cover it, in proportion of half a bushel to a bushel of seed. If the corn is the common sized eight-rowed; put three kernels in each hill one foot apart. Cover not over one inch in depth, unless it is very dry, as the sooner the grain is up the larger the stalk will be, and the better the crop. Mr. C. says he knows from actual experience that the compost for one acre will produce more corn than fifty loads of manure. I shall try the experiment, and hope others will do the same. A. S. F. *Granville, N. Y., April* 17, 1850.

Manufactures vs. Agriculture.

EDS. CULTIVATOR—In your marginal note on page 56, of the January number of *The Cultivator*, did you not omit to deduct the *wear and tear* in farming operations? In the first place, 25 per cent. is too high for the wear and tear of a cotton factory. properly conducted. The wear and tear on $10,000 worth of cultivated land, which is made to produce crops yearly, would, according to my observation, be fully equal to that of a cotton factory employing the same amount of capital, especially when we consider the deterioration of the soil, fences, teams, utensils, &c. I therefore think there can be no error in Professor Tucker's tables. ARGUS.

Domestic Economy, Recipes, &c.

Importance of Good Bread.

We make the following extract from a private letter on this subject:

"I observed that some agricultural society at the East, last year, offered a premium for the best *bread*. I should have been glad to have seen such a premium offered by our State Ag. Society. Making good bread is a most important as well as very rare accomplishment—shall I not say that it is quite as important as good plowing, or raising good cattle? I am most decidedly of the opinion that it is—but among the very good breadmakers that I have met with, none could give me directions by which another, less skilled, could succeed equally well. Is it too late for the Society yet to offer such a premium? The competition would certainly be one of great interest. But there should be an essential requisition, —that is, that every thing should be accurately stated by weight or measure, and the time required for each part of the process as nearly pointed out as practicable, and every thing else accurately described. Directions thus obtained, would prove of incalculable value. But the premium should be liberal—enough so to institute a series of careful experiments. An acquaintance, who is a very nice judge of such matters, who has travelled lately in Europe, assures me that in Paris, the best bread is as much better than our best bread, as the latter is better than a sour or unrisen loaf. He attributes a part of this superiority to the better quality of wheat or flour used in Paris, but also more largely to the eminent skill brought to bear in its manufacture. I would go a long way to eat a slice of meritorious premium bread, but much further to get the *receipt* for making it."

The Poor Man's Plaster.

EDS. CULTIVATOR—For rheumatism and dyspepsia, I have tried no external application equal to "the poor-man's plaster," which gently irritates the skin. The common way of using it however, greatly lessens its value.

You go to the druggist's and ask for the article. It is most likely that he has kept it a long time, and the wax has become dry and hard. Now *don't let him roll it up*, though more convenient, but carry it home, flat as it came from the manufacturer's, and *prevent the wax from scaling off*.

Another thing—it is customary to heat the whole plaster, and apply it at once to the skin. If it sticks well, having been spread on stiff paper, it feels about as comfortable as a shingle would on the same spot; for on no part of the body can it be laid where the action of the muscles would not chafe it, break the grain of the paper, and cause much of it in a few days to peel off. Now listen to me. *Cut the plaster into four pieces* at least; and in applying them to the skin, *leave a finger's breadth between each piece*. This method gives *joints* to the plaster—no unpleasant stiffness is felt—the paper is not rumpled and broken—and it will last a long time. AN OLD FARMER.

To kill Rats without Arsenic.

In answer to a correspondent, who wishes to know how to kill rats without arsenic, we give the following from a late number of the *Farmer's Magazine:*

In or near the places frequented by these pests, place upon a slate some dry oatmeal, lay it thin, and press it flat, so that you may easily know what has been taken away. The rats, if not disturbed, will come regularly to feed upon this. Supply them thus with fresh oatmeal for two or three days, then add two or three drops of oil of aniseeds, stir the mixture well together, feed them well with this for two or three days, then for one day give them half the quantity they have usually eaten, and on the following day place the following mixture: to four ounces of dry oatmeal, scented with six drops of oil of aniseeds, add half an ounce of carbonate of barytes pounded, mix this well with scented oatmeal, then lay the mixture on the slate as the oatmeal had been placed, and allow the rats to come and eat of it without interruption. A few hours after partaking of this meal they may be seen running about as if drunk or paralytic, retiring to their haunts to die. Rats are extremely sagacious, therefore when they have eaten only a small portion of the mixture, it should not be disturbed for some time. The oil of aniseeds is disagreeable to dogs and many other animals, but, in small quantities, alluring to rats.

BEARING YEARS OF APPLES.—The Baldwin is an enormous bearer, every other year. A New-England cultivator, by altering the usual bearing year of his trees, so that his crop comes in the scarce year when the price is high, has increased his profits on the crop

Notices of Publications.

THE FARMER'S GUIDE TO SCIENTIFIC AND PRACTICAL AGRICULTURE.—This is the title of a work, by HENRY STEPHENS, of Edinburgh, author of the "*Book of the Farm*," and Prof. JOHN P. NORTON, of Yale College, New Haven. The first volume of the work has already been issued in Edinburgh, and the American edition is in course of publication from the stereotype plates which have been imported. It is put forth in numbers of 64 pages each—22 numbers comprising the work. The price is 25 cents per number, or $5 in advance for the whole. The numbers can be sent by mail at periodical postage. We have received the first number of this work, and from its careful perusal, and from what we know of the writings of its distinguished authors, we venture the opinion that it will be the most complete treatise on agriculture that has ever been issued. It will treat the subject in its broadest and most comprehensive sense—fully discussing its principles and relations to the various sciences, and describing its practical details. It will be illustrated by 18 to 20 engravings on steel, and more than 600 wood engravings in the highest style of the art. Published by LEONARD SCOTT & Co., 79 Fulton-street. New. York.

WORKING FARMER.—This paper has been enlarged, and its typographical appearance much improved. We have received the first number of the new volume, which contains a large amount of good matter. It is edited by Prof. J. J. MAPES, and published monthly by KINGMAN, CROSS & Co., New-York. Terms, $1 a year.

AMERICAN JOURNAL OF SCIENCE AND ARTS.—We have received the March number of this valuable journal. It contains among other articles of importance, an article on the "Connection between the Atomic weights and the physical and chemical properties of Barium, Strontium, Calcium and Magnesium, and some of their compounds," by Prof. E. N. HORSFORD; "Observations on the Size of the Brain in various Races and Families of Man," by Dr. S. G. MORTON; "An account of some Fossil Bones found in Vermont, in making excavations for the Rutland and Burlington Rail Road," by ZADOC THOMPSON; "On the American Prime Meridian," by Prof. J. LOVERING; with much other interesting intelligence. Conducted by Professors SILLIMAN and DANA. Published at New Haven, on the first of every second month, at $5 a year.

BRITISH AND FOREIGN MEDICO-CHIRURGICAL REVIEW; or Qurterly Journal of Medicine and Surgery. This high-standing periodical is republished by Messrs. R. & G. S. WOOD, 26, Pearl-street, New York. It should be in the hands of every practitioner of the healing art. Terms, $3 a year.

ILLUSTRATED SELF-INSTRUCTOR IN PHRENOLOGY AND PHYSIOLOGY, with one hundred engravings, and a phrenological chart of character; by O. S. & L. N. FOWLER. This is an interesting manual to those who wish to inform themselves in regard to the subjects on which it treats. It is very handsomely "got up," and is sold for only twenty-five cents. Published by FOWLER & WELLS, New-York.

EXPERIMENT WITH ASHES.—A correspondent of the *New-England Farmer*, spread "on a small square of a few rods" ten bushels of ashes. on worn-out meadow. "The grass there was three feet high, while all around, with equal advantages, except ashes, it was hardly five inches high in July."

Answers to Correspondents.

CLAYEY LAND.—M. V. B. B., Fishkill, N. Y. The first step towards the improvement of this land, is to drain it thoroughly by under drains. Then plow it seven inches deep, following with the sub-soil plow, which should be run at as great a depth as the team can move with it. Use plenty of coarse manure, and work it well into the soil for the double purpose of letting in the air—which effects favorable changes in clays—and of making the soil more loose. The muck you speak of, will have the effect to loosen the soil, and will also act as manure; but it will be better to let it lie in heaps one season before it is applied, to dispel the acids it usually contains when in its natural beds.

CULTIVATOR FOR STONY LANDS.—J. W. G., New Fairfield, Ct. The steel-tooth cultivator is best for stony and rough land, and best for working among corn, except where the ground is very light and clean from weeds or grass. It may be had at the Albany Agricultural Warehouse. Price, $7; with cast iron teeth, $5¼.

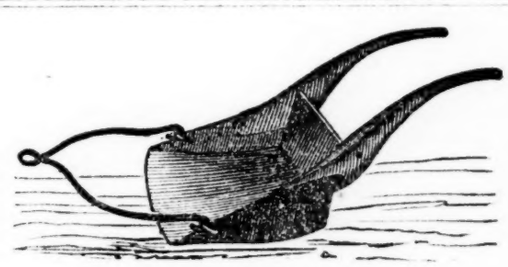
GRAFTING.—W. A. E., West-Springfield, Mass. The wild black cherry is of no value as a stock for grafting the cultivated varieties. The various kinds of native thorn will answer for grafting the pear. It is best to graft close to, or below the surface of the ground.

MERINO AND LEICESTER RAMS.—J. W. W., Spring-Grove, S. C. The best opportunity for you to buy this kind of stock will be at our State Fair, first week in September next. They can be had, probably, at all prices, from ten to a hundred dollars a head. The fall is the best time to take them south.

BONES.—M. D., Jr., Lynchburg, Va. You will find the best direction for preparing bones for manure, in the series of articles now in course of publication in our columns, by Prof. NORTON.

WORK ON AGRICULTURE.—A New-York Mechanic. As a work calculated to furnish "a good fundamental and practical knowledge of farming generally," we would recommend the 'Farmer's Guide.'

LOCATION FOR A MECHANIC TO ENGAGE IN FARMING.—J. F., New-York. We should think Wisconsin or Northern Illinois would afford good situations for such a person as you mention. A residence near some thriving village or town, where there are good facilities for a market, would be desirable.



Cast Iron Dirt Scraper.

This implement is made in various forms. The cheapest and best are now made of cast iron for bottom, sides and edge, with wood back and handles, and wrought iron bail. They are extensively used for excavating and filling up for buildings, and for making and repairing roads. The prices vary, according to size and weight, from $4.50 to $10. They may be had at the Albany Agricultural Warehouse.

Notes for the Month.

COMMUNICATIONS have been received, during the past month, from Dr. S. D. Martin, W. C. Carter, N. W. McCormick, A Sheep Man, H. C. W., T. M., A. M., Prof. J. P. Norton, Chas. L. Fleischman, A Subscriber, A. B., W. L. Eaton, A New-York Mechanic, D. M., Sylvanus, An Old Farmer, One of your Subscribers, A. S. F., C. C., Niagara.

BOOKS, PAMPHLETS, &c., have been received as follows:

The Massachusetts System of Common Schools; being a revised edition of all the Laws and Regulations in force in that State, in relation to its public schools. Also,

The Thirteenth Annual Report of the Mass. Board of Education, for 1849—both from WM. BACON, Esq., Richmond.

A lithographic print of the Cotton Plant, in its various stages, drawn from nature by C. L. FLEISCHMAN, U S. Consul at Stuttgard, and published at that place—decidedly the best exhibition of the plant which we have seen.

An Essay on Manure, by Dr. S. L DANA—from C. M. SAXTON, publisher, New-York.

The Journal of Agriculture, and Transactions of the Highland and Ag. Society of Scotland, for January and March, from BLACKWOOD & SONS. Edinburgh.

The American Bird Fancier, by D. J. Browne, from C. M. SAXTON, publisher, New York.

The Advocate of Veterinary Reform, and Outlines of Anatomy and Physiology of the Horse; also, a Veterinary Dictionary, by GEO. H. DADD, M. D. From the author, Boston.

Transactions of the Trumbull County, (Ohio) Agricultural Society, for 1849, with the Address, delivered by SAMUEL ST. JOHN, A. M.

PLANTS FROM CALIFORNIA.—A letter received from WM. R. PRINCE, dated Sacramento City, Jan. 27th last, states that a large collection of seeds of rare forest trees, shrubs and flowering plants, which had been collected by him in California, had been forwarded to Flushing, Long-Island, for the establishment of Mr. Prince. The collection is said to embrace 150 species, comprising the most splendid specimens of the Flora of that interesting region. We understand that there are several species of oaks, pines and other trees, bulbous plants, &c., the introduction of which, to our region, will be either useful or ornamental.

ANALYSIS OF SOILS, MANURES, &c.—In answer to several inquiries, we will state that Mr. J. H. SALISBURY, of this city, is prepared to make analyses of soils, rocks, manures, &c, at the following rates:

1. Complete quantitative analysis of a soil,	$5
2. Complete organic analysis of a manure, marl, or peat,.....	5
3. Proximate organic analysis of manure,..	5
4. Analysis for obtaining one ingredient,..	1
5. For information on any particular subject,.....	1

The above fees to accompany all samples or communications, which may be directed to the Secretary of the N. Y. State Agricultural Society.

LARGE CORN CROP.—R. W. T., of Newton-Centre, Mass., writes that he raised last year, on an acre and one hundred and twenty-four rods of ground (or a little over an acre and three-fourths,) 424 bushels of ears of corn, two of which, he thinks equal to a bushel of shelled corn. The ground was formerly a frog pond. It had been drained and had borne good crops of grass for two or three years. It was plowed in the spring of 1849, heavily manured with barn-yard manure, and planted to corn—the above being the result.

DAIRYING.—A correspondent requests us to ask information, from practical dairymen, in regard to the following subjects: What are the best breeds of cows for the dairy, and how much butter may be expected from each cow in a year? What is the most profitable mode of feeding cows in the different seasons? It will afford us pleasure to receive and publish any articles which can throw light on these subjects.

POISONOUS LIZARDS.—N. HOWARD, Esq., of Stephentown, N. Y., informs us that there is a species of lizard that is poisonous to fowls, if eaten by them. It is described as the "red lizard." Mr. H. states that he has in several instances known fowls killed by eating this reptile. In one instance, a fowl died suddenly, and on opening its crop one of the lizards was found; in another instance, a fowl, which was in good health was seen to eat a lizard, and in a few minutes afterwards was taken sick, staggered and soon died. Mr. H. is a close observer, and not likely to be mistaken in his conclusions.

TRANSMUTATION.—We do not intend to bore our readers with this subject; but are under the necessity of alluding to it occasionally for the purpose of explanation. Mr. THEODORE PROBASCO, of Quaker-Town, N. J., writes that, until lately, he has always believed that chess would not grow from wheat; but his former opinions have been changed by a wheat-head having been shown him, from which projected a "fibre containing six chess-grains." We have seen several cases of this kind, and have more than once explained how they occurred. The panicle to which the chess is attached, is entangled or wound into the wheat-head, and when it gets dry is broken from the parent stem, and appears attached to the wheat. On carefully opening the wheat-head, the manner of connexion will be plainly seen.

THE BEE-MOTH.—A new plan of preventing the ravages of this depredator, is given in the advertisement of Mr. WHALEN, in this number. Personally, we have no knowledge of the discovery; but it appears to be new, and may be tried without much expense or risk. Mr. WHALEN is the presiding officer of the Saratoga County Agricultural Society, and is not unknown as a writer on agricultural subjects.

FAT OXEN.—Our attention was called a few days since, to a pair of fat oxen, owned by JAMES L. MONIER, of Naples, Ontario county, which were on their way to New-York. Their weight, according to the bill of charges from the railroad agent, was 6,325 lbs. They are six years old this spring. As their blood is not particularly known, they are called of the "common stock." Their present owner purchased them of Mr. MUNDAY, of Allegany county, when they were about two years old. They are both small-boned, well-made animals, and one of them, (the smaller of the two,) will compare favorably in symmetry and quality, with any ox we have seen.

SHORT-HORNED BULL LOCOMOTIVE.—In Dr. MARTIN'S communication, on another page, this animal is spoken of as though he were living. Mr. AMBROSE STEVENS desires us to say that he had been informed that Locomotive died some three or four years since, and that he supposed this was the fact when he wrote the article to which Dr. M. alludes. He wishes to be informed whether Locomotive is still alive.

HORSES GIFFORD MORGAN AND GENERAL GIFFORD.—The whereabouts of these noted horses will be seen by the advertisements of Mr. ARNOLD and Mr. INGERSOLL, in this number. The first named horse is so well known that nothing need be said here in regard to him. The latter is a colt of the

former, and has acquired considrable celebrity in the central part of this State, having been owned for several years by Messrs. MASON & MUNRO, of Onondaga county. Mr. MARKS, of Onondaga county, also advertises an excellent young horse of the same stock.

SALE OF SHORT-HORNS.—We are informed that GEORGE VAIL, Esq., of Troy, has recently sold to Mr. HUMPHREY, of Michigan, a bull called American Comet, 2¼ years old, by Meteor, dam Hilpa,—together with two cows and two calves, all except one having more or less of the blood of the "Bates' stock." The aggregete amount paid for these animals, we learn, was $1,000—the bull being reckoned at $300. We trust the enterprise of the purchaser will be properly rewarded.

TARRING SEED CORN.—Mr. DURAND writes us that a mistake occurred in regard to his mode of preparing seed-corn, as given in our last, (p. 123). He says —"It should be soaked 24 hours in strong saltpetre-water; then take a small quantity of tar in a basin and water enough to cover the tar; simmer over the fire till the tar dissolves with the water, and turn it on the corn, and stir with a paddle till the corn is smeared; then plaster till the corn will separate freely."

PITTS' SEPARATORS.—These machines are still being manufactured at Rochester, N. Y. They are of great importance in grain-growing districts, and so far as we learn, give entire satisfaction. They can be adapted to threshing machines of any kind. For particulars see Mr. Pitts' advertisement.

TRANSMUTATION.—Mr. ALEX. CULBERTSON, of Pleasant Unity, Pa., writes—"The idea of the transmutation of wheat into chess, is an error which is caculated to do great injury to the farmer, because he is not likely to use much effort to get rid of a pest which he thinks will return with the first injury done to his wheat, either by winter-killing, by the fly, or by late pasturing. In proof of the fact that nature does not cut such wild capers, there are farmers within my knowledge who have not a stalk of chess on their farms, although their wheat is liable to the same casualties that other wheat growers experience, but they, of course, are not believers in transmutation. One of them has been many years a reader of *The Cultivator*, and being a man of mind and good judgment, his reading of agricultural works tells well on everything about him."

GILMORE'S BEE-HOUSE.—An advertisement of this article will be found in our present number. We have formerly known the inventor of this bee-house, as a successful manager of bees, and we learn from various persons in Maine, that this plan is thought to possess important improvements.

☞We noticed in our last number some of the fine animals killed for the display of meat in this city, on the 22d of February last. A correspondent, who dates at Schodack-Centre, informs us that WM. CASTLE had in his stall, in the Centre Market, on the day alluded to, a calf, raised and fatted by MILTON KNICKERBACKER, Esq., of Schodack-Centre, which, taking age into consideration, he thinks was "far superior" to any of the animals spoken of by us. We did not see this calf.

☞MORSE'S GREY, a well known and valuable horse, it will be seen by the advertisement of Mr. GRANT, is at his old stand.

SUFFOLK PIG.—Messrs. BURDETT, of Cambridgeport, Mass., furnish to the *Plowman* an accout of a Suffolk pig, which was bought by them on the 8th of July, 1849,—at which time it weighed 110 lbs., alive—and was killed on the 4th of October following, when it weighed, dressed, 370¾ lbs.—making a nett gain of over three pounds per day. The same paper gives an account of another Suffolk pig, thirteen months old, fatted by J. W. KIMBALL, Charlestown, Mass., that weighed, dressed, in Faneuil Hall Market, 470 pounds.

CLINTON COUNTY, N. Y. AGRICULTURAL SOCIETY.—We have received a copy of the premium-list of this society for the current year, together with a copy of the constitution, and an able address to the "farmers and friends of agriculture" in that county. The farmers of that section are much awakened, and are making rapid improvements. The officers of the society are Elias A. Hurlbut, President; Peter Keese, Samuel H. Moore, S. V. R. Havens, Anderson Keese, J. S. Stetson, Z. C. Platt, Roswell O. Barber, John W. Bailey, A. J. Moses, John Dunning, Vice-Presidents; Willetts Keese, Peru, Secretary; Jonathan Battey, Treasurer.

HARROWING WHEAT IN SPRING.—Myron Adams of East Blooomfield, N. Y., has for many years harrowed over the whole of his wheat fields every spring, pulverising the crust and greatly benefitting the crop. If the ground is to be seeded with clover, it is harrowed in at this time. The whole amount torn up by the roots has been found by examination not to exceed the amount of a bushel on ten acres. The wheat looks rather unpromising when thus dusted over with earth; but the first shower washes it off, and leaves it clean, fresh and vigorous.

CORN-FIELDS AND CORN-CRIBS OF THE WEST.—The *Cincinnati Gazette* states that JAMES DAVIS, of Waverly, Ross county, Ohio, cultivates eighteen hundred acres exclusively in Indian corn, and had last winter a corn-crib filled, which was *three miles long*, ten feet high, and six feet wide. It states further, that on the Great Miami Bottom, about 25 miles below Cincinnati, there is one field, (belonging to several owners,) seven miles long by three miles broad, which has been regularly planted to corn for nearly half a century. In the Wabash Valley there are also extensive corn-fields—one between Terre Haute and Lafayette, being ten miles long.

WHEAT CHANGED TO OATS!—Prof. Lindley received a head of wheat, which had grown in an oat field, having a real, gennine oat flower growing out of it! He supposed that the oat had been stuck in by some one trying to mystify philosophers, but a careful examination showed the suspicion unfounded. Glue was next taxed, but no glue was found. The head was next pulled to pieces by the Doctor's old experienced botanical fingers, when the mystery was laid bare; the slender stalk of the oat flower had become twisted round the ear of wheat when both were young, and they had both grown up in strict embrace, the wheat chaff completely concealing the oat stalk, till the latter, becoming accidentally snapped off in some unknown manner, the oat was left fast to the wheat. "The union," says Dr. Lindley, "was so perfect that it would have been almost certain to deceive every eye except that of an unbelieving naturalist." It would have been a very interesting specimen for our friend of *The Michigan Farmer*, to have deposited in his cabinet of curiosities.

LARGE FARMING.—H. L. Ellsworth of Fayette, Indiana, conducts the business of Farming in a decidedly princely manner. He had last year, a thousand acres of corn, which yielded about fifty bushels per acre, making about fifty thousand bushels, which he has been feeding to twelve hundred hogs.

SALE OF THE BATES HERD OF SHORT-HORNS.—The *Mark-Lane Express* of April 1st, contains an advertisement by Mr. STRAFFORD, stating that he will sell by auction, on the 9th of May, this celebrated herd—consisting of 22 bulls and 48 cows and heifers.

☞ The attention of northern farmers, who wish to change their location, is invited to the advertisement of Dr. PECK, in another page, who offers for sale a large tract of land on Long-Island, which, it appears to us, offers great inducements to purchasers, from its nearness to markets, its susceptibility to improvement, fine climate, and cheapness.

IMPORTATION AND SALE OF STOCK.—Mr. L. G. MORRIS, of Mount Fordham, Westchester county, N. Y., left New-York on the 17th April, for Europe. One of his main objects is to obtain agricultural information generally, and especially to purchase such domestic animals as are calculated to improve the stock of the United States. He purposes to attend the sale of short-horned cattle belonging to the estate of THOMAS BATES, Esq., of Kirkleavington, Yorkshire; but will not confine his purchases to that herd. He expects to return to America in September next, and the second annual sale of cattle from his own herd will take place in October. Whatever stock he may import will be at his place at the time of sale. Printed catalogues of the animals to be sold will be issued in due time.

QUANTITY OF SALT YET ON HAND.—Soundings in the sea, according to Bakewell's Geology, have been made one mile and a quarter deep. Laplace, from calculations on the tides, showed the depth of the ocean to be not less than ten miles. This contains salt enough to cover the whole one thousand feet thick; or enough to cover all dry land half a mile thick. Sea water has 2¼ per cent. of common salt, and ½ per cent. of other salts.

Vermont Premium Crops.

The Rutland County, Vt., Ag. Society, paid premiums for the following crops, the growth of 1849. *Winter wheat*, 38¾ bushels on one acre and five rods; *Spring wheat*, 41 bushels 9 quarts, on one acre—the land "mountain sheep pasture;" *Indian corn*, 88¼ bushels on one acre; *Oats*, 88¾ bushels on one acre; two other competitors raised 72 bushels and 64¼ bushels per acre; *Potatoes*, 335½ bushels on half an acre.

The Addison County, Vt., Ag. Society awarded premiums for the following crops, the growth of 1849. *Winter wheat* 44 bushels per acre: *Spring wheat* 41 bushels per acre; *Indian corn*, 93 bushels per acre; second and third premiums 88 and 78 bushels per acre; *peas*, 32 bushels per acre; *sugar beets*, 305 bushels on a quarter of an acre; *carrots*, 268 bushels on a quarter of an acre.

The Orange County, Vt., Ag. Society, awarded premiums on *Wheat*, (supposed to be spring wheat,) as follows: 39½, 39¼, 37½, 32¾ bushels per acre; on *rye*, 42⅜, 39½, 22¼ bushels per acre; *Indian corn*, 110, 96⅜, 94½, 91 bushels per acre; *barley* 30¼ bushels per acre; *oats* 89, 78, 69 bushels per acre; *carrots* 245½, 230, 203, per quarter of an acre.

The Windsor County, Vt., Ag. Society, awarded premiums for *winter wheat* 43¼ and 38 bushels per acre, 38 bushels per acre on three acres; *spring wheat* 31¾ bushels; *oats* 83¾ bushels per acre, on four acres; *Indian corn* 128 bushels per acre, 104 bushels per acre, on four acres; *potatoes* 363¾ bushels per acre, 208 bushels on half an acre.

Prices of Agricultural Products.

ALBANY, APRIL 20, 1850.

[Review of the Market for the last month.]

FLOUR.—The market has maintained an uniform character, with a tendency during the last few days to more firmness on the part of holders, and an advance in the better grades. This feeling, so different upon the near approach of the opening of the canal is caused by the apprehension of light supplies from the lakes; from which point flour is shipping south by the various canals and railways, inducing at New-York some slight speculative feeling. To what extent this will continue remains to be seen; we perceive however that a shipment of some 3,000 barrels of flour from Chicago for St. Louis, had made the market at the latter place dull, and flour on the 11th was quoted lower. The sales have averaged about 3000 bbls. weekly, closing at $4.62½a$4.75 for common state, $4.87½a$5.12½ for ordinary to favorite state, $5.12½a$5.25 for Michigan, $5.37½a$5 50 for pure Genesee, $5.62½a$5.75 for fancy Genesee and Ohio, and $5.87½a$6.25 for extra.

GRAIN.—The same speculative feeling in regard to flour, is applicable to wheat, of which the market at this point is completely bare; the only sale made, on the spot, was a lot of 8000 bushels Genesee, at about $1.28½—part not strictly prime, going at a lower figure; and on Saturday, 2600 bushels prime Genesee and 2500 do Mediterranean, to arrive by canal, sold on private terms. For rye, the supply has been from the street, and quotations have advanced to 58a59c. Oats have continued in good demand, and sales in the street have steadily advanced from 37½ to 40a41c. at which figure they are firm; from store, we notice a sale to-day of 1500 bushels, at 42c. and 2500 bushels from the road within a few days, at 39½; to arrive by canal, a sale was made on the 23d ult. at 43c. In Corn, beyond the street supply, there has been nothing done; quotations have ranged from 55a57c., closing at the higher figure. In Barley, the street supply has been limited, and prices have ranged from 65a75c. according to the wants of purchasers; the closing figures were 67a68c., with little or none arriving; for parcels to arrive there has been much speculative feeling, and sales have been made, delivered from the canal, at from 61a66½c. for two and four rowed, a sale at the higher figure having been effected on Saturday; holders generally ask 70c., and that and a higher figure is looked for within a few weeks, owing to the demand for the article in the western states; at Cleveland 80c. has been paid, and at Milwaukie 70a75c. Barley malt is 78a80c., at which figures some 10,000 to 15,000 bushels have been taken. Small peas 87½. White beans $1.50.

WHISKEY has been a dull market, owing to the light receipts; prices have generally declined and S. P. bbls. are quoted at 23½c. with none in first hands.

SEED. The market both here and at New-York is very dull, and the trade is almost a retail business; quotations for lots may be given at 6½a7½ for Ohio and State medium, and 8½a9½ for larger. Timothy is also dull at $2.50a$2.75; for Canadian and State, $2.-62½a$3.

WOOL. The near approach of the opening of the Canal, and of the new clip has had a tendency to reduce prices. The sales during the month have been 116,000 lbs, about one-half of which sold on private terms, and the balance at prices ranging at 33½a 31c. for No. 1 pulled, and 36½a35c. for super.; the closing sale to day was made at 32 and 35c.

PROVISIONS. Beyond the ordinary retail demand, we notice sales 286 bbls. Beef Hams, at $16.50 for country, and $17a$18 for city, closing at the lower figure; 10,000 lbs. smoked hams at 9c. and 17 hhds. pickled hams at 7½c. The retail figures for Cut meats are 7½ a8c. for Western smoked hams, and 9c. for city; Shoulders 5a5½c. Lard 7a7½c. in bbls. and kegs. Butter 8a10c. for Ohio, 12a14c. for common state, and 16a18c. for good. Cheese 6½a7½.

John A. Pitts,

Manufacturer of THRESHING MACHINES and DOUBLE PINION HORSE POWERS, 68 South St. Paul Street, Rochester, N. Y.

THE subscriber continues the manufacture of the celebrateed "Pitt's Separator." It is the same machine that has stood, and now stands unrivalled by any machine for Threshing and Cleaning Grain, in existence. It has been exhibited at State and County Agricultural Fairs, in the United States and Canada,—always receiving the *First Premium.*

The Horse Power, for strength, ease, durability, and cheapness of repair, is unequalled. The driving wheel is six feet in diameter, driving two full pinions, each receiving equal power; 2 bevel wheels, driven by the full pinions, connect with two pinions, on the line shaft; thus it will be seen, this Horse Power is double the strength of any single geared Power. It may be driven with from two to ten horses, depending upon the power required.

The Machines have fully sustained all I claim for them; I therefore solicit orders from those who would secure the best Threshing Machine and Horse Power.

Please address as above. JOHN A. PITTS.

Rochester, May 1, 1850—3t.

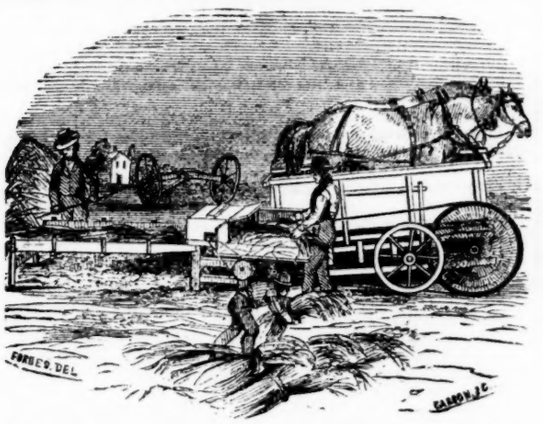
Poultry Books.

THE American Poulterer's Companion, by C. N. BEMENT—price $1.

The American Poultry Yard, by D. J. BROWNE and SAMUEL ALLEN—price $1.

The American Fowl Breeder, by an Association of Practical Breeders—price 25 cents.

For sale at the office of THE CULTIVATOR.



Wheeler's Patent Improved Railway Chain

Horse Power, and Overshot Thresher & Separator.

THE subscribers, proprietors of the Patents for these Machines, and manufacturers of them, having recently increased their facilities for manufacturing are now prepared to fill orders for machines, and to establish and supply agencies to any extent that may be desired.

These machines are favorably known wherever they have been used or exhibited. They have taken premiums at many different State and County Fairs held in Massachusetts, New York, New Jersey, Pennsylvania, Ohio and also in Canada, never having competed for premiums without success and flattering commendations.

As many as 2,000 of them are now in use, of which over 500 were sold the past season.

The accompanying cut gives a view of a two horse machine at work, with the hands necessary to attend it. It will thresh from 125 to 200 bushels of wheat, or twice the quantity of oats per day. The one horse power or single machines thresh rather more than half as fast as the double ones.

These horse powers are strong and durable, and run extremely light. With one end of the power slightly elevated (as represented in the annexed cut,) the weight of the horse alone affords sufficient power to thresh at the rate before stated, or to drive circular and upright saws, or any other machines used by farmers requiring propelling power.

The Overshot Thresher takes the grain from a level feeding table or apron, (of a proper height to allow the feeder to stand erect and feed, without annoyance from dust,) and passes it through a toothed or spiked concave or bed, placed over the cylinder. A recent improvement admits of lowering the concave so as to bring it nearer the cylinder, and at the same time so varying the inclination of the spikes, as to set the machine for threshing tough or damp grain, or short oats, and resetting it at pleasure, for long rye or wheat or oats in good order, or for timothy, grass or clover, and all this is accomplished without stopping the machine, so simple is the process. By means of the Separator, the straw, as it comes from the Thresher, is effectually separated from the grain.

The Power, Thresher and Separator, complete, for either one or two horses, is easily loaded on a common farm wagon; but where frequent moving is desired, the two horse machines are placed on wheels in such a manner that when used for threshing, the forward wheels are removed, dropping that end of the power, and leaving the opposite end elevated on the other axle, ready to receive the horses. By this arrangement, (which has been made for the convenience of those who make threshing a business, and for partnership machines,) two men can with ease set a two horse machine ready for work in 15 minutes, and re-load it for moving in the same time.

W. M. & Co. also manufacture Stalk, Hay and Straw Cutters, to be used with their Horse Powers, and also Circular Saws and Benches, for cutting ordinary fire wood, and locomotive and other fuel.

Every machine made or sold by W. M. & Co., or their agents, is WARRANTED to work to the satisfaction of the purchaser, or it may be returned to them, or to the agent of whom it may have been purchased, within sixty days, and the purchase money, (if paid,) will be refunded.

These machines are so light, compact, and easily handled, as to admit of transportation to any part of the country with trifling expense—the weight of the two horse machine, complete, being less than 2,000 pounds, and of the one horse, about 1,200.

The manufacturers are now establishing agencies in all parts of the United States and Canadas, where they are needed to facilitate the sale of these machines. Good agents are wanted in the Southern and Western States and the Canadas, to whom liberal commissions will be allowed.

HORACE L. EMERY, Esq., is a general agent for the sale of these machines in the State of New-York, and is sole agent for the city of New-York, and the New England States.

Our other agents, as far as definitely ascertained, are—Rapalje & Briggs, Rochester; T. C. Peters & Brother, Buffalo; Peter R. Sleight, Esq., Poughkeepsie; F. F. Parker & Brother, Detroit; ——— ———, Chicago; W. D. Bacon, Waukesha, Wisconsin; John Melick, Trenton, N. J.

These machines can also be had of John Mayher & Co., New-York city. WHEELER, MELICK & CO.,

Hamilton street, corner Liberty and Union sts., Albany, N. Y.

No Humbug.

THE undersigned, after 20 years' experience and much research, has discovered a cheap chemical compound, easily applied, which completely prevents the ravages of the Bee-moth, and which can be adapted to each and every kind of hive, whether patent or otherwise. This discovery he will impart to any individual on the receipt of one dollar. It being understood the purchaser shall hold himself honorably pledged, not to impart the information to others. The whole contained in a circular, to which is added several valuable suggestions in the construction of hives and management of bees, worth more than any patent hive in existence.

Address, post paid, SETH WHALEN,

May 1, 1850—3t * Ballston Spa, N. Y.

10,000 Acres of Long Island Land for Sale,

At Lake Road Station, or Irvington.

THE undersigned is, and has been for several years, engaged in the improvement and cultivation of the wild lands of Long Island. The fact being now fully established, beyond any doubt, that the land in the middle parts of the Island, along the borders of the L. I. Railroad, is as good and productive, when cultivated in the same manner, as any other part of Long Island. 10,000 acres are now offered for sale, in parcels to suit purchasers, from 10 acres, to 100, or 1,000, at a very low price, and on favorable terms. This tract is near the geographical centre of the island, being about equi distant from Long Island Sound, and the Great South Bay, (the Island being about 13 miles wide there,) and 48 miles from New-York.

There are many highly cultivated farms in the immediate vicinity, on the north and south side of this land,—having been settled and cultivated more than 150 years. It is well watered, being bounded on the north by the famous Ronkonkama Lake—has also a large and never failing stream running through it. The lake and stream are full of fish—perch in the lake, and trout, in great abundance and of large size, in the stream. The country abounds in game, deer, and wild fowl.

The climate is mild and perfectly healthy, the surface is smooth, gently undulating, with an inclination to the south of about 15 feet to the mile—the soil—free from stone, easy and pleasant to cultivate—is a loam, large portions of which may be called a heavy loam, or it is of sufficient tenacity to make sun-burnt brick, right out of the surface—is from 18 inches to 3 and 5 feet deep, and is susceptible of the highest degree of cultivation. The railroad passes through this tract, affording easy and constant communication with the Brooklyn and New-York markets, where the highest price in cash, can always be had for every article that the farmer and gardener can produce. To capitalists, an excellent opportunity is here presented to obtain a large tract of valuable land at a low price, possessing all the advantages for settlement of a new country, without any of the privations,—but with all the privileges and comforts of an old one. Apply to A. B. ALLEN, Esq., Editor of the *American Agriculturist*, 187 Water Street, New-York, or to E. F. PECK,

306 State Street, Brooklyn, L. I.

☞ Lake Road is an important and central depot on the Railroad—there are large buildings and a settlement there.

May 1, 1850—3t.

Burbank or Morgan Chief.

THIS Horse will stand the present season at the stable of the subscribers in Warren, Mondays and Thursdays: at Waitsfield, Tuesdays and Wednesdays; and at the village in Rochester, Fridays and Saturdays.

This horse was sired by the celebrated Old Woodbury Morgan, afterwards known by the name of Burbank Morgan. His dam was known by the name of Empress, and was sired by the original Justin Morgan Horse. It will therefore be seen that this horse possesses equally as much Morgan blood as either of the four Stallions sired by the Original Morgan, and more Morgan blood than any other stallion now living, except the Old Gifford, which was sired by the same horse. For further particulars, see our bills.

WRIGHT & ELDREDGE.

Warren, Washington county, Vt., May 1, 1850—2t.*

Geo. Glenny's New Farm & Garden Newspaper, "THE COUNTRY GENTLEMAN,"

IS published in London, on Mondays in time for post, with the latest market prices of Corn, Meat, Cattle, Seeds, and Money, and is the very best weekly Review and Family Newspaper in England, as well as the acknowledged highest authority in all matters connected with Horticulture. Price 6s. 6d. per quarter in advance.

Address GEO. GLENNY,

March 1—3t. 420 Strand, London.

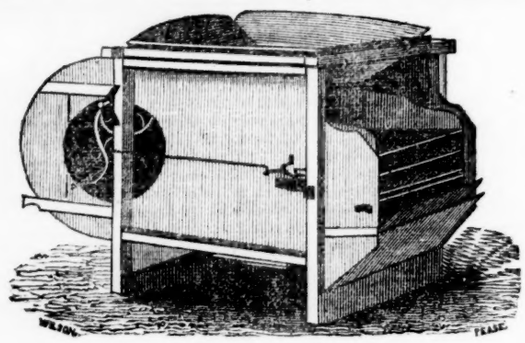
Trees! Trees!! Trees!!!

FOR SALE, at Mount Ida Nursery, Troy, N. Y., a choice variety of Fruit Trees, comprising Apples, Pears, Peaches, Plums, and Cherries, of the most approved kinds—the greater part of them worked from bearing trees, and all of them by the subscriber—therefore he can recommend them with confidence. He would also say to those that have not had the experience, that trees brought from the South (if they do live) do not grow as thrifty for a number of years, as those raised in a Northern latitude, which many persons can prove from experience. He also pays particular attention to the transplanting of his trees so as to have them well rooted.

Also, a good variety of Shade Trees, consisting of Scotch Elm, Sycamore, Linden, Horse Chestnut, Mountain Ash, Evergreen Privet for Hedges, China and Hardy Roses, &c., &c.

Catalogues and other information can be had of the Nurseryman

Feb 1—6ms. JOSEPH CALD ELL.

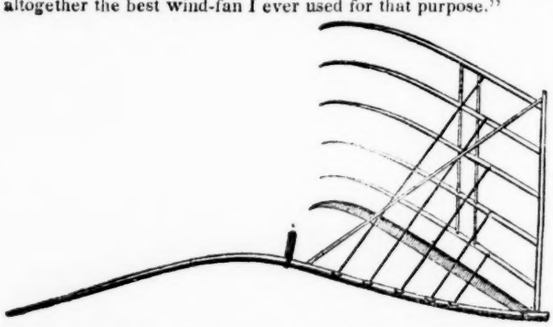


I. T. GRANT & CO.'S

PATENT *FAN MILLS AND CRADLES.* We continue to manufacture these celebrated Mills and Cradles.

They have been awarded six first premiums at the New-York State Fairs, and at the great American Institute in New York, and several County Fairs, always taking the first premium over all other mills. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the year 1847 they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society, for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains the same as before.

Our fans are extensively used and highly approved at the south, for cleaning rice. We are permitted to make the following extracts from letters received from Hon. J. R. Poinsett, of South Carolina:—"The fan you sent last summer, [1848] has been successfully used to clean dirty rice, and winnow that from the threshing floor. It answers every purpose." In relation to another of our fans, he writes, (April 23, '49.)—"Both this and the first mill you sent, work very well; and the last, which is the largest that can be well worked by a man, cleans the dirty rice perfectly, and is altogether the best wind-fan I ever used for that purpose."



Our Cradles have taken the first premiums at two New York State Fairs, and are considered the best in use.

The great encouragement we have received from dealers and agriculturists has induced us to greatly enlarge our business, and we hope by strict attention, to merit a further patronage.

Orders will be thankfully received, and receive prompt attention. I. T. GRANT & CO.

Junction P. O., Rens. Co., 8 miles north of Troy

May 1, 1850—tf.

Sir Walter

WILL stand the present season (for a limited number of mares.) at the stable of the subscriber, one-fourth of a mile north of the Railroad Depot, in East Hartford, Main Street. SIR WALTER is a fine natural trotting horse; was six years old last June; is a beautiful dapple bay, fifteen hands and three inches in height; weighs 1175 lbs; and by the best judges, is pronounced the most *Perfect Horse* in this part of the country. His stock in the neighborhood of Wilbraham, Mass., stands unrivalled.

Sir Walter is three-fourths English and one-fourth Morgan. He was sired by the imported horse Sir Walter, who was justly celebrated for symmetry of form, speed, ease and elegance of action. His dam is from a Morgan mare, by the English horse Pincher, formerly owned in Pennsylvania, and was sold for $1100. *Sir Walter* obtained the *first premium* at the Hartford County Agricultural Society, last fall. He was purchased and brought into the county for the express purpose of improving the breed of horses. The terms are therefore put low, viz. $4, a single leap, and $6 the season. Insured by agreement. During the two past years, he has covered more than two hundred mares. All persons interested in breeding *fine horses* are invited to call and judge for themselves. Mares from a distance will be pastured and well taken care of on reasonable terms. HENRY OLMSTED.

East Hartford, Ct., May 1, 1850—1t.*

Merino Sheep for Sale.

THE subscriber has a few choice full blood Paular Bucks still on hand; also, a few yearlings and lambs from his Paular ewes, and a Buck imported by J. A. Taintor, Esq., which promise to be of unequalled beauty of form, hardiness of constitution, fineness and quantity of wool. Price from $10 to $15.

Also, a few ewes of the same breed. Price $10 to $20.

Those who wish to secure a selection from this lot of sheep, will do well to make their selection, or send in their orders at an early day.

They can be shipped to any part of the United States with perfect safety. ALFRED H. AVERY.

Galway, Saratoga Co., N. Y., May 1—1t.*

Gilmore's Patent Bee-House.

HAVING purchased the right of using and selling the above valuable improvement for several of the counties of this State, the subscriber would invite the attention of Farmers, Gentlemen of Leisure, and Mechanics to the subject.

The objects to be gained by this invention, are as follows: The swarming of bees in the open air is entirely obviated, and they will increase faster—combining any number of swarms or stocks of bees into one body or republic, thus uniting their strength against a common enemy; and by changing the relations the bees sustain to each other, doing away with all cause for discord or quarreling. The hives are so constructed as always to be kept fresh and pure, and also a succession of new comb. This is indispensable to the health and success of the bee, affording a perfect protection against the ravages of the "bee moth." An arrangement of boxes, tumblers and jars is attached to the hives, into which the bees will deposit their honey as readily as in the hives; they may at any time be removed, without in any way injuring or killing the bees, or disturbing those in the hive. The bees may at pleasure be removed from one hive or part of a hive into another, without the apiarian being in any way exposed, and without injury to the bees. In connection, there is a receipt for a preparation for "Feeding Bees," by the use of which honey can be made purer and in much larger quantities at a trifling cost. The whole arrangement is very cheap and easy of construction.

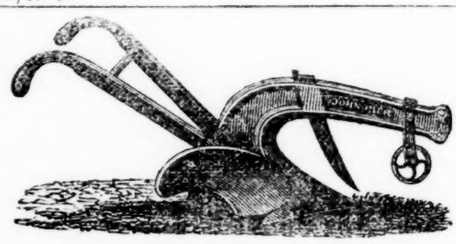
By this system a degree of perfection is attained never before realised, effectually doing away with all the objections to keeping bees, and making them a source of infinite profit.

Prices.—Individual right to make for his own use, and using any number of hives, including a receipt for the preparation, $10; a right to make and use three hives only, $5.

All communications upon this subject, addressed to the subscriber, post paid, will be promptly attended to.

JOHN H. HIDLEY.

Post Office address, Troy, N. Y.—Residence, Greenbush, Rensselaer Co., N. Y.



The Plow that Beats the World.

RICH'S PATENT IRON-BEAM PLOW.

THIS Plow has become the universal favorite of the farming community wherever it is known. It is but two years since it was first introduced in Northern New-York, in which time it has attained a popularity beyond that of any other plow yet known. Messrs. John Rich & Co. manufactured and sold upwards of one thousand of these Plows last season, in the months of May, June, July, August and September. The first premium was awarded these plows, at every Fair where they were exhibited, viz., Saratoga, Montgomery and Rensselaer, and at the Great Fair of the American Institute, Castle Garden, N. Y.

The success which attended this plow the last season, has prompted the subscribers to extend their business facilities, so as to be able to supply any calls that may be made upon them, which was not the case last season. The great advantages attained by these Plows over others now in use, are—1st. they require near one-third less draft of team; 2d. they are much easier held or guided; 3d. the form of the beam is such that it cannot choke under the beam; 4. the form and construction of the mould-board is such that meadow or mucky soil, will not adhere to it and clog it as is the case with other plows. 5. They are less liable to get out of repair, and much easier repaired when needed; 6. They pulverise and work the soil most admirably; 7. the shortness of the beam bringing it near the team, which is a great advantage in point of draft, ease in guiding the plow, and turning the team, as well as beauty of work. In short, it possesses every good quality which the patentee, a man of forty years' experience, has been able to combine. More than two thousand recommendations in favor of this plow, among which are many of the ablest and most scientific farmers in the United States, can be obtained; but the subscribers, in preference, respectfully submit it to the tillers of the soil, in competition with any Plow ever offered to the public.

Manufactured and for sale, wholesale and retail, by

BOSWORTH, RICH & CO., Patentees,

May 1, 1850—1t 335 & 437 River-St., Troy.

Improved Short-horns—Bates' Stock.

IN the August (1849) number of *The Cultivator*, is an article by me on the Short-horns, which I imported last year for Mr. Sheafe, Col. Sherwood and myself. The January number contains strictures by S. P. Chapman, on so much of my article as relates to the bull, 3d Duke of Cambridge. As Mr. Chapman does not understand my views, and therefore mis-states and mis-construes them, it is necessary to answer him. He makes many assertions and takes positions, which present questions and issues, so numerous, complicated and extensive, that, *at present*, I must leave them unnoticed. There is beside, *just now, a strong propriety* in not discussing these issues. As soon as *this condition* ends, *I shall resume the subject, and will fully consider them.* In this notice, I propose merely to state my meaning in the paragraph, to a portion of which Mr. Chapman objects, as *he* understands it, and refute one of his positions. To be clear, I must re-produce the passage entire. Speaking of the 3d Duke of Cambride, I said:

"I have great pleasure in knowing that I have brought to this country so superior a bull from the herd of that eminent breeder, Mr. Bates. He is the *only* bull in America got by Mr. Bates' *crack-prize* bull, Duke of Northumberland (1940,) the best bull Mr. Bates ever bred. Mr. Bates has *but one* more left got by the same bull; and Duke of Northumberland is now dead. Mr. Bates repeatedly told me that 3d Duke of Cambridge was more like his sire than any bull ever got by him. Breeders desiring the blood of Mr. Bates, can no where else in this country procure it *with such high characteristics of style, quality, symmetry and substance.*"

Mr. Chapman quotes *merely* the last sentence and discusses it alone. The whole paragraph being connected, and the last sentence the conclusion or deduction, and the whole having been the subject of remark, I will briefly state what it *only* means, and was meant *only* to mean. I mean by it, that I have brought to America a superior bull from the herd of Mr. Bates; that this bull, 3d Duke of Cambridge, (5941,) is the *only* bull in America *got* by Mr. Bates' *Duke of Northumberland*, (1940;) that Duke of Northumberland, (1940,) was Mr. Bates' "*crack prize*" bull, and was the *best* bull Mr. Bates ever bred; that Mr. Bates has but one more bull got by Duke of Northumberland, (1940;) that the Duke of Northumberland, (1940,) is dead, and that Mr. Bates repeatedly told me that 3d Duke of Cambridge, (5941,) was more like his sire, (Duke of Northumberland,) than any bull ever got by him, (Duke of Northumberland.) In 1845, Duke of Northumberland died. In July, 1848, Mr. Bates owned but two bulls got by Duke of Northumberland, and these two were 2d Duke of Oxford and 3d Duke of Cambridge. I brought 3d Duke of Cambridge to America, and this left but one son of Duke of Northumberland, (1940,) at Mr. Bates', and Mr. Bates did not in his lifetime part with that son. I designed to place before breeders the fact, that there is in this country but *one* bull, the get of Mr. Bates' *best* bull, and that if they wish the blood of Mr. Bates' they could no where else in America, than from Cambridge, get *Mr. Bates' blood, through the particular channel of a resembling and superior son* of Mr. Bates' best bull, Duke of Northumberland, (1940.)

The last sentence of the paragraph which I have quoted from my August article, is this:—"Breeders desiring the blood of Mr. Bates, can no where else in this country procure it with such high characteristics of style, quality, symmetry and substance." This sentence is the text; its disproval the object of Mr. Chapman's whole article. Never was an unfortunate sentence so misconstrued. In an article printed in Canada, it is made the basis on which to charge me with having asserted, "that from Mr. Sherwood, [through 3d Duke of Cambridge,] and from him alone, the Duchess *blood* can be procured" [in this country.] In letters addressed to others, and by the receivers shown to me, this sentence is made to mean, "that the 3d Duke of Cambridge possesses more of Mr. Bates' Dutchess blood than any other bull in America," and I am charged by its use with *so saying, and designing so to say.* Mr. Chapman makes it mean the *same* thing, *but does so* by way of *inference*, or *deduction*. His words are:—"No one will deny, that if any one animal from a herd possesses the power of imparting to his produce 'higher characteristics of style, quality, symmetry and substance,' than any other animal from the same herd, he must possess more of the *choice* blood of that particular herd. To question this, is at once doubting the efficacy of blood animals." That is, my position, if it be *true, must* be true, because 3d Duke of Cambridge has more of Mr. Bates' *choice* blood than any other bull in America. This is the meaning which, by deduction Mr. Chapman places on my words. Having done this, he proceeds to prove, by quoting Mr. Bates' opinions, in his own words, from public printed letters, that the *choice* blood of his herd, in Mr. Bates' opinion, is the Duchess blood. No one ever doubted that this was his opinion, who either knew Mr. Bates or had read his printed or private letters. I know such was his opinion. Mr. Chapman then gives from the 4th vol. of the Herd Book the pedigrees of 3d Duke of Cambridge, and Mr. Vail's Duke of Wellington, and by these pedigrees shows that Cambridge has by his sire *one* cross of Duchess blood, and that Wellington has *two* by his sire and the sire of his dam. The precise quantity which Mr. Chapman gives to each is ¼, i. e. 2-8, of Duchess blood, to Cambridge, and 3-8 to Wellington; and therefore he concludes, that Wellington must be a better bull than Cambridge. Logical conclusion! Now all this shows a total want of knowledge of breeding and of pedigrees in general; and in in special of the particular pedigrees which Mr. C. gives of the animals under his consideration. But to explain this as *to the pedigrees*, would require *too much space now*, and I pass it.

If Mr. Chapman be correct, then it would be true that a bull got by one of Mr. Bates' Dutchess bulls, dam by a Dutchess bull, granddam, *a poor roadside tack*, would be a better getter—would impart more 'high characteristics of style, quality, symmetry and substance'—than a bull got by a Duchess bull, out of a pure, full bred, stylish, shorthorn cow, of another approved tribe. Such an absurdity no one, I think, would maintain, save Mr. C. and *those* who helped him to produce his article.

On Mr. Chapman's rule, if sires have each the same amount of Duchess blood, they would possess and impart equal "style, quality, symmetry and substance." Yet no two full brothers were ever equally good animals and equally good getters. Duke of Northumberland, [1940,] and 2d Duke of Northumberland, [3646,] were full brothers. The first was superior as an individual, and very superior as a getter. The last was far inferior to his brother as an individual; far inferior as a getter. The 3d and 4th Dukes of Northumberland were full brothers and *twins*. The 3d Duke Mr. Bates never used; he was far inferior, both as an individual and as a getter, to the 4th Duke. The 3d and 4th Dukes had *more Duchess* blood than their half-brother Duke of Northumberland, (1940,) and were far, very far, inferior to the Duke of Northumberland, as individuals and as getters. Mr. Vail's Duke of Wellington, (3654,) has more Duchess blood than his half brother Locomotive, (4242,) and yet Locomotive was a far better animal and better getter than Wellington. Mr. Harvey's bull, (6658,) son of Locomotive, a distinguished winner even in Great Britain, is vastly superior to any thing ever got by Wellington. Duke of Cleveland, (1937,) the sire of the dam of Mr. Vail's Duke of Wellington, (3654,) was a Duchess bull, and was so inferior, that Mr. Bates says of him, "this bull never exceeded in weight forty stones of fourteen pounds per stone, when above three years old;" that is, 560 pounds, dead weight; *not half* the proper weight of a *merely fair* animal of that age. (See the London New Farmer's Journal, Aug. 8, 1842.) Duke of Northumberland, (1940,) *at the same age*, weighed, live weight, 2520 lbs. Sink one-third live weight, and his dead weight would be 1680 pounds; just *three times* the weight of Duke of Cleveland. Could any thing be *more despicable* than the Duke of Cleveland, (1937)? *Yet*, he had MORE *Duchess blood* than Duke of Northumberland, (1940,) by one-half.

The second best bull, as an animal, ever bred by Mr. Bates, *in his opinion*, was the first Duke of Cambridge, (3638,) a full brother of 3d Duke of Cambridge, and winner of the head prize in his class at the show of the Royal Agricultural Society of England, in 1840—an animal for which he was offered more money than for any other, except Duke of Northumberland, (1940.) And yet 1st Duke of Cambridge had only one-fourth as much Duchess blood as Duke of Cleveland. (1937.) 1st Duke of Cambridge was refused to Earl Spencer by Mr. Bates, at a very large price, and when sold to go to Australia, Mr. Bates said of him, "He is too good a bull to remain in England, out of my own herd." And so he was exported at twenty-one months old. Mr. Bates' Duchess bull, Short-tail, (2621,) the sire of Mr. Vail's Duke of Wellington, had more Duchess blood than Belvedere, (1706,) for Belvedere had none; and yet Short-tail was an inferior animal, deficient in every point, except his brisket and his handling, and was at best only a moderate getter; while Belvedere, (1706,) was magnificent as an animal, and the best getter that Mr. Bates ever used, and was the sire of the best animals he ever bred Mr. Renick, the agent of the Ohio Cattle Company, who went to England to purchase for them, said of Belvedere, that "he was the best and finest bull he ever saw in England or America." The best cow which I saw in Mr. Bates' herd was a Duchess, and *was not* got by a Duchess bull; but was by Belvedere, (1806.) The poorest of the whole herd was a Duchess, and *was* got by a Duchess bull. Another Duchess cow, *got by a Duchess bull*, was a very superior cow. The two last were equal in Duchess blood; and yet, their produce were like themselves—from the superior one, superior, from the inferior one, inferior.

Oxford premium cow, the dam of Mr. Vail's imported Duke of Wellington, (3654,) was got by Duke of Cleveland, (1937.) Her half-sister, Oxford 2d, was got by Short-tail, (2621.) Short-tail and Duke of Cleveland had the *same precise amount of Duchess blood*, and of course Oxford premium cow and her half-sister Oxford, 2d, had also the *same precise amount* of Duchess blood. Yet Mr. Bates never kept on his place any thing out of Oxford premium cow, which he *could sell;* never used a bull *out of Oxford premium cow*, for any purpose, *even to get steers.* Yet he never sold an animal out of Oxford 2d, at all—and in a letter to Mr. Vail, printed in the American Agriculturist, he says he would not sell he produce, of which he then had four, for five hundred guineas [$2,500] each; nor, indeed, would he sell them at any price. The full brother and the sons of Oxford, 2d he used to his whole herd, except herself and her daughters. And Mr. Bates was right; for Oxford 2d, and all her produce, are vastly superior to Oxford premium cow and her produce.

Mr. Vail commissioned me, when in England, to select from Mr. Bates' herd a young bull. I could not get for him such a one as I approved, at a *suiting* price; and I did not, therefore, execute the commission. Mr. Bates offered me, for Mr. Vail, a bull calf, by 2d Beverly, (5963,)—(a good Duchess bull)—dam Oxford, 4th, by Duke of Northumberland, (1940,) *grand-dam, Oxford premium cow;* but a regard for Mr. Vail's interest made me refuse the offer, though the price *suited.* I saw the *calf's dam;* I saw Mr. Bates' *opinion*, as shown by *his practice*, and acting accordingly, refused the calf.

I have cited these peculiar examples, to show by animals having Duchess blood, the utter absurdity of Mr. Chapman's notions of breeding. I have compared animals to show his errors, and he set me the example. I have *confined* myself, in *my comparisons*, to the blood that he selects for *his* comparisons, and have, like Mr. C., quoted Mr. Bates' opinions, as printed, and his practical ones, as shown by his breeding.

Having refuted the positions of Mr. Chapman, shown him in error, and proved that my position may be true, and *not* in consequence of the reasons he assigns, let me state what my words so often quoted, *do* mean, and what they *only can* be *made* to mean, by *any* construction of the sentence. I mean, and *only* mean that 3d Duke of Cambridge will impart Mr. Bates' blood, in some degree, more or less; that in himself he is the bull having the most "style, quality, symmetry and substance," of all the bulls that have ever come to America *from Mr. Bates' herd;* that he will get produce with more "style, quality, symmetry, and substance," than any bull from Mr. Bates' herd in America. Now I mean *this*, and *nothing more;* and *not* that he *had* or would *impart more Duchess* blood.

Mr. Chapman does not pretend to deny my positions, when construed as I have here set them forth. *He makes another issue.* I admit that Mr. Vail's Wellington has more Duchess blood than Cambridge. I never thought he had not; never said he had not; and never wrote or spoke a sentence that would in any manner, directly or indirectly, indicate such a thing; and but from misconception or design, I never would have been charged, directly or by deduction, with the assertion, that "from Mr. Sherwood, and *from him alone*, the *Duchess blood* can be procured," nor with the assertion, direct or consequential, "that Cambridge has more Duchess blood than any bull of Mr. Bates' breeding in America."

Mr. Chapman institutes a comparison between Mr. Vail's animals and Cambridge, in point of *Duchess blood*, giving pedigrees. I could *investigate* these pedigree, and *will hereafter*. He wisely makes *no* comparison between those animals in their *physical* character. I could, but will not *now*, though I will hereafter. I will merely say, that excellence in the physical animal consists of "style, quality and substance," and excellence in blood consists in having good blood, *unmixed with bad blood;* and as like begets like, it is necessary that *animals should have their descent, not only from pure blood, but from animals who were characterised by physical excellence.* I know Mr. Bate's herd, and certainly am not to be instructed in the excellence of Mr. Bates' Duchess tribe, by those who have never seen a single animal of it. Mr. Chapman has stated matters to which I now make no allusion, but I beg to assure him that I will return to them hereafter, when it will be more proper to discuss them than now, and when I shall not be charged, as I have been, with views and purposes which I have never entertained. A. STEVENS.

May 1, 1850—1t.

Sir Charles.

THIS fine young horse, owned by TITCOMB & WALDRON, of Waterford, N. Y., will be kept this season by PHILIP R. ARGOTSINGER, one mile from Johnstown, Fulton county, N. Y. He was got by Morse's Grey, dam a Messenger mare.

May 1, 1850—2t.

The Thorough-bred Imported Horse Leopard,

BRED by the Duke of Bedford, is pronounced by the best judges in Canada and the States, as being superior to any blood horse ever imported from England. This horse will stand for mares at J. LAPHAM'S. For pedigree, &c., &c., see English Stud book, and the Racing Calendar for 1846—also, advertisement in *The Cultivator* for 1850.

Terms $7 service, $10 season, $15 insurance.

Peru, Clinton Co., May 1, 1850—2t. O. K. LAPHAM & CO.

The Old Gifford Morgan,

THE highest blooded Morgan Stallion now remaining, will stand the coming season at the stable of Benjamin Gates, in Walpole, N. H. Terms $25. $5 of which to be paid at the time of service, and the remaining $20 if the mare prove in foal.

Pasturage furnished on reasonable terms. A. ARNOLD,

Walpole, May 1—5t.* Agent for the Proprietors.

The Morgan Stallion

GIFFORD MORGAN, JR., will be four years old May 29, 1850. Was sired by Gifford Morgan, G. sire, Woodbury Morgan, G. G. sire, Justin Morgan. His dam was sired by Sherman Morgan, and he by Justin Morgan. The G. dam of Gifford Jr., was sired by Justin Morgan.

This combines in Gifford Morgan, Jr., *more* of the Morgan blood than is possessed by *any other Stallion* in this State. In color, size, form, and action he closely resembles his sire. He will be kept on my farm at $1[illegible] E. MARKS.

Fairmount, Onondaga Co., April 15, 1850.—1t.*

Morgan Horse General Gifford.

THIS justly celerated horse will stand the coming season at Lodi Village, Seneca County, N. Y. He was got by Old Gifford Morgan, out of a pure Morgan mare. In his size, color, form and action, he closely resembles his distinguished sire, and is one of the very best specimens of this invaluable race of horses.

Terms of insurance, $12.

Good pasture provided at the usual rates, and all necessary attention given to mares from a distance.

Accidents and escapes at the risk of the owners.

May 1, 1850—3t. CHARLES W. INGERSOLL.

Morse's Grey.

THIS celebrated horse will stand the ensuing season at the stable of JAMES RICE, in Spiegletown, three miles north of the village of Lansingburgh. He is a beautiful dapple grey, 15¾ hands high, strongly and finely proportioned; has trotted his mile in two minutes and fifty seconds; is a square trotter, and combines first-rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper, are eagerly sought after in the market, and command prices varying from $150 to $500.

The very high reputation of his stock as road horses, and the extraordinary prices they command, render him by far the most profitable horse to breed from of any in the country.

Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse will be under the charge of his former owner, Mr. CALVIN MORSE.

Terms, $10. Insurance to be agreed upon.

Communications addressed I. T. GRANT, P. M., Junction, Rensselaer county, will receive prompt attention.

May 1, 1850—2t.

The Well known Hunter and

STEEPLE CHASE HORSE, WAXY POPE.—This celebrated imported horse will stand for mares the ensuing season, at the stable of the subscriber, 2½ miles west of the village of Fonda. The season will close July 4th.

Terms—$10 the season. Insurance by agreement.

Pedigree.—Old Waxy, the sire of WAXY POPE, was by Sir F. Pool's WAXY; his dam Prunella, (also, the dam of Penelope, Parasol, Podargus, Pioneer, Pawn, Pope Joan, Picquet and Prudence, the best of their day at New-Market,) by Highflyer; great dam Promise by Juap, Julia by Blank; great dam by Partner—Sir F. Pool's Waxy was by Pot-8-o's, the best bred son of Eclipse, his dam Maria by King Herod, grand dam Jisette by Juap; Swordsman, the sire of the dam of Waxy Pope, was by the Duke of Grafton's Prize Fighter, his dam Czara by Eclipse—there can be no more fashionable or better combination of blood than this.

A colt of his get took the first premium on three-year-olds at the State Fair at Saratoga, and three of his stock took premiums at Syracuse.

All mares parted with before foaling time, will be held as season mares, and charged accordingly.

All accidents and escapes at the risk of the owners.

Fonda, May 1, 1850—1t.* JOHN J. BOSHART.

Morgan Horse Black-Hawk.

THIS well-known stallion will stand for the present season at the stable of the subscribers; terms, $20 the season. The superiority of this horse as a stock-getter, is becoming more and more highly estimated, as his progeny increase, and their powers as fast trotters and durable roadsters are demonstrated. For particulars, see large bills. D. & D. E. HILL.

Bridport, Vt., April 1.—3t.

The Imported Thorough-bred Horse

CONSTERNATION, will stand for mares the coming season, at the farm of the subscriber, near the city of Syracuse.

TERMS.—Five dollars in advance, and five dollars additional if the mare is got in foal. Mares left with the subscriber during the season, or until he consents that they shall return, will be insured for $10. Pasture 3 shillings per week. No mare taken except at the risk of the owner. J. B. BURNET.

April 1, 1850.—2t.

Morgan Hunter and Morgan Chief.

MORGAN HUNTER will stand the coming season, at the stable of S. A. GILBERT, East Hamilton. Terms $10 to insure. This fine horse is seven years old; was bred in Springfield, Vt.; got by Gifford Morgan; dam by the same horse. For figure and description, see *The Cultivator* for 1849, page 216.

MORGAN CHIEF, will be three years old on the 18th of June next. He is a very superior colt; was got by Gifford Morgan, dam by Green Mountain Morgan. See *The Cultivator* for 1849, page 67. He will be kept for a few mares only, at the stable of H. R. ACKLEY, East Hamilton. Terms $10 to insure. ACKLEY & GILBERT.

East Hamilton, Madison county, N. Y., April 1, 1850.—2t.

The Morgan Horse

MAJOR GIFFORD, will stand the ensuing season on Mondays, Tuesdays and Wednesdays, at the stable of E. W. Sheldon, in Sennett. On Thursdays and Fridays, at the stable of S. B. Rowe, in Camillus, and on Saturdays, at the stable of John C. Munro, in Bellisle.

Major Gifford is seven years old this spring, his color a beautiful chestnut—was sired by the Gifford Morgan, his dam a pure Morgan. Breeders of good horses are invited to call and see him.

TERMS.—Ten dollars to insure. Pasturage furnished. Accidents and escapes at risk of owners. MASON & CO.

April 1, 1850.—3t.*

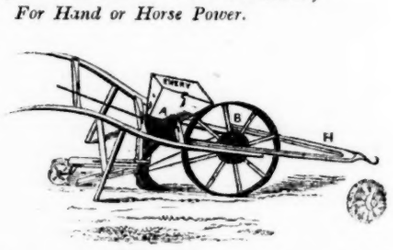
Wire for Fences.

IRON WIRE FOR FENCING, constantly for sale at New-York prices. Z. HOSMER,

April 1, 1850—6t. 110 Milk St., Boston.

Emery's Seed and Corn Planter,

For Hand or Horse Power.



THIS is acknowledged the best machine for the purpose, now in use. They have been in use four years, and the demand constantly increasing. The first premiums of the N.Y. State Ag. Society, the Massachusetts Charitable Association, the American Institute, and at every county society where it has been exhibited, have been awarded it.

It is equally well adapted for all small seeds in drills, or Corn, Beans, Peas, &c., in either hills or drills, any quantity and distance apart, &c., &c.

It is driven by a gear motion without bands, which insures a constant and uniform action. Price $14. For sale at the

Albany Agricultural Warehouse,

Nos. 369 & 371 Broadway.

April 1, 1850. H. L. EMERY.

JUST PUBLISHED,

BY DERBY, MILLER AND CO., AUBURN,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS,

CONTAINING directions for the Propagation and Culture of Fruit Trees, in the Nursery, Orchard, and Garden, with Descriptions of the principal American and Foreign Varieties cultivated in the United States. With 300 accurate illustrations. One volume of over 400 pages, 12 mo. Price $1.

A cheaper, but equally valuable book with Downing's was wanted by the great mass. Just such a work has Mr. Thomas given us We consider it an invaluable addition to our agricultural libraries. *Wool Grower.*

We predict for it a very rapid sale; it should be in the hands of every fruit grower, and especially every nurseryman. It is a very cheap book for its price.—*Ohio Cultivator.*

It is a most valuable work to all engaged in the culture oi fruit trees.—*Utica Herald.*

It is a book of great value.—*Genesee Farmer.*

Among all the writers on fruits, we do not know of one who is Mr. Thomas' superior, if his equal, in condensing important matter. He gets right at the pith of the thing—he gives you that which you wish to know at once; stripped of all useless talk and twattle. No man has a keener eye for the best ways of doing things. Hence we always look into his writings with the assurance that we shall find something new, or some improvements on the old; and we are seldom disappointed. This book is no exception. It is *full*. There is no vacant space in it. It is like a fresh egg—all good, and packed to the shell full.—*Prairie Farmer.*

In the volume before us, we have the result of the author's experience and observations, continued with untiring perseverance for many years, in language at once concise and perspicuous.—*Albany Cult.*

For sale in New-York, by M. H. NEWMAN & CO., and C. M. SAXTON. Boston, B. B. MUSSEY & CO. Philadelphia, THOMAS, COWPERTHWAITE & CO.

*** Copies in paper covers sent by mail free of expense on receipt of $1, post paid. Direct to DERBY, MILLER & CO.

Auburn, April 1, 1850.—3t.

BENNETT'S AMERICAN POULTRY BOOK.

The Poultry Book

And Fowl Breeders' Guide.

BEING a Treatise on the Breeding, Raising, and General Management of *DOMESTIC FOWLS*, with numerous original descriptions, and Portraits from Life. By JOHN C. BENNETT, M. D.

This work will be found to contain a greater amount of original and other information, both practical and useful, in regard to Fowl Breeding, than is contained in all other American works together. It will be illustrated with nearly FIFTY PORTRAITS of the most choice varieties of American and Foreign Fowls, some forty of which are from life, from drawings taken especially for this work, of the most important breeds, and several of them from Fowls very recently imported.

The publishers have spared no expense to bring out this work in a superior manner, both in regard to the engravings, the merits of the work, and the general execution of every part of the book. And it is believed that the work will be found to contain more Practical Information on *Breeding and Managing Domestic Fowls*, than any work issued in this country.

Price—in Muslin binding, 75 cts.; in Paper covers, 50 cts.

PHILLIPS, SAMPSON & CO., Publishers,

April 1—3t. 110 Washington St., Boston.

New Patent Churn.

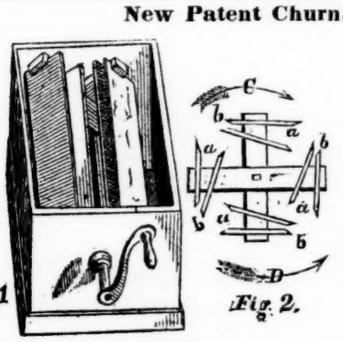


Fig. 1 Fig. 2.

THIS churn is offered to the public with the fullest confidence in its superiority over any other crank churn in use. It has all the advantages of the crank churn without having any of their objections, the iron rod is dispensed with and the difficulty of gathering the butter is removed, as the arrangement of the floats is the best for gathering of any ever before offered. For further particulars, see Catalogue of Albany Agricultural Warehouse, or February No. of *Cultivator*.

The Silver Medal of the American Institute was awarded this churn, as the best of a large variety exhibited at their Fair in October last.

Also, Kendall's, Gault's and Dash Churns, constantly on hand at the Albany Agricultural Warehouse of

H. L. EMERY,

April 1, 1850. 369 & 371 Broadway.

Transactions of the N. Y. State Ag. Society.

TRANSACTIONS of the New-York State Agricultural Society, from 1841 to 1849, eight vols., price $8, for sale at the office of THE CULTIVATOR.

Patent Rail Road Horse Power,

And Overshot Threshing Machines and Separators,

NO Threshing Machinery ever invented has met with so rapid an introduction, or given so general satisfaction as this.

Four years since, and less than a dozen setts were made and sold within this State, where last season, upwards of three hundred setts were made and sold, beside many in Pennsylvania and the Western States.

Farmers desiring to avoid the trouble, inconvenience and expense attending the employment of the ordinary lever powers and threshers, are requested to examine our terms, descriptions, machines, &c. before purchasing, or again employing the large machines.

For further particulars, see Catalogue of Albany Agricultural Warehouse and Seed Store, Agricultural Papers, and Reports of Agricultural Societies, &c., &c. H. L. EMERY,

April 1, 1850. Nos. 369 & 371 Broadway, Albany, N. Y.

Agricultural Warehouse,

193 *Front Street, New-York.*

THE subscriber, manufacturer and dealer in *Agricultural Implements*, offers for sale one of the largest assortments to be found in the United States. Among which are the celebrated *Premium Plows*, which were awarded the highest premium of the *New-York State Fair* in 1847, and of the *American Institute* in 1846, 1848, and 1849. Also, the *Centre Draught, Eagle*, and all other *Plows* mostly in use. *Corn Shellers, Straw Cutters, Fanning Mills, Portable Grist Mills, Horse Powers, Threshing Machines, Seed Sowers, Wheelbarrows, &c.* All of which will be warranted to be of the best quality and sold at the lowest rates. JOHN MOORE,

March 1—3t. 193 Front Street.

Horse Powers and Threshing Machines.

E. PLANT, No. 30 Cedar Street, New-York, Agent for the Proprietor, for making and selling the "Warren" Improved Two and Four Horse Powers and Threshers. Also, "Trimbles."

Price of the "Warren" Two Horse Power and Thresher, only $80
do do Four do do do $110
Price of the "Trimble" Two Horse Power, (without Thresher,) $60
do "Warren" do do do do $50
do do Four do do do $75

Bands, from $4.50 to $6.

These *latest Improved* Threshers and Powers give universal satisfaction, and are deemed far superior to any others known heretofore for any thing like their cost.

Cash Orders filled promptly.

N. B. *PURCHASING & COMMISSION AGENCY.*

The undersigned also continues the business of the late E. Plant & J. Plant, (E. Plant & Co.,) of Purchasing for Orders, on Credit or for Cash, Dry Goods, Groceries, Hardware, &c., &c., for a commission of 2½ per cent. Produce, such as Sugar, Cotton, Tobacco, Peltries, &c., also received and sold on Commission. E. PLANT,

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